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THE JOURNAL OF THE TELEPHONE INDUSTRY

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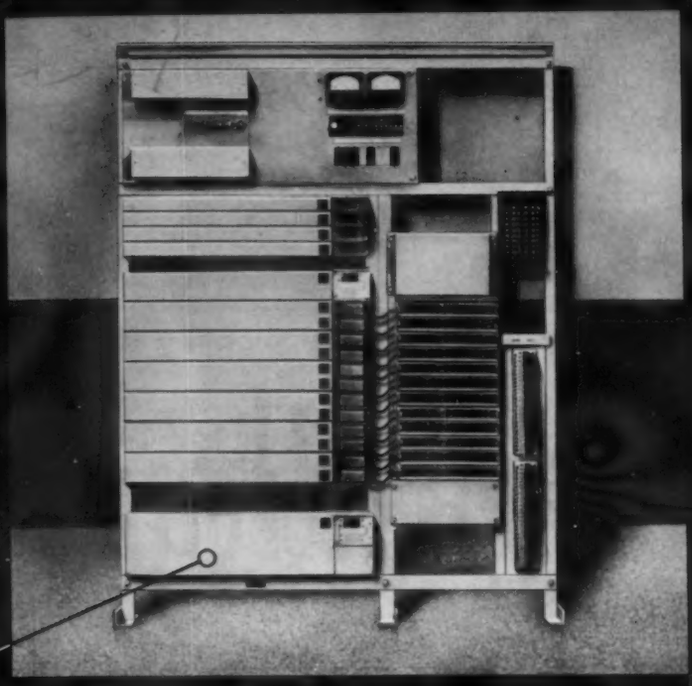

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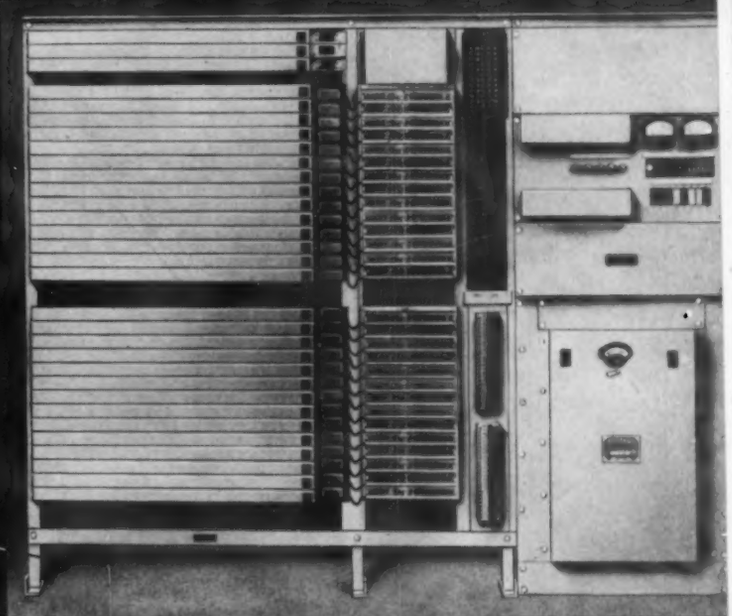

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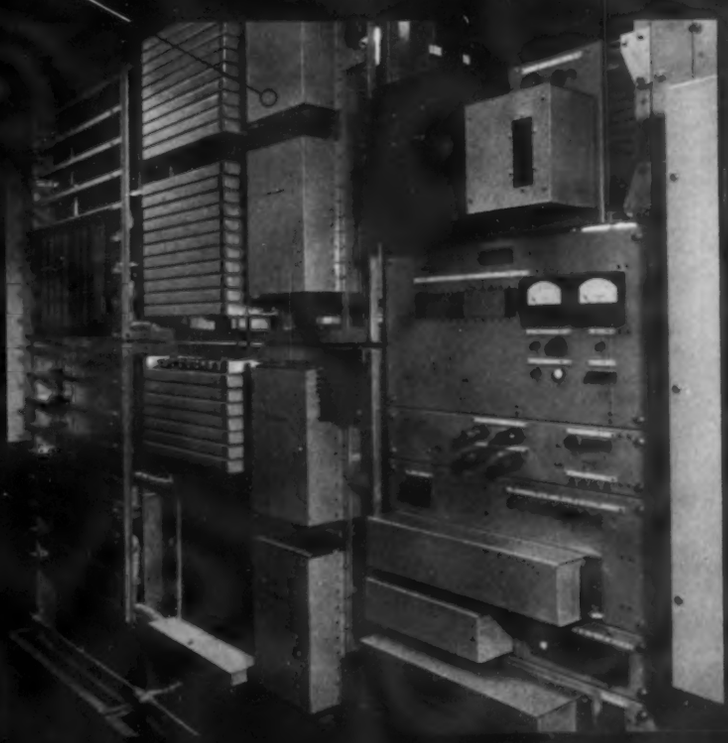

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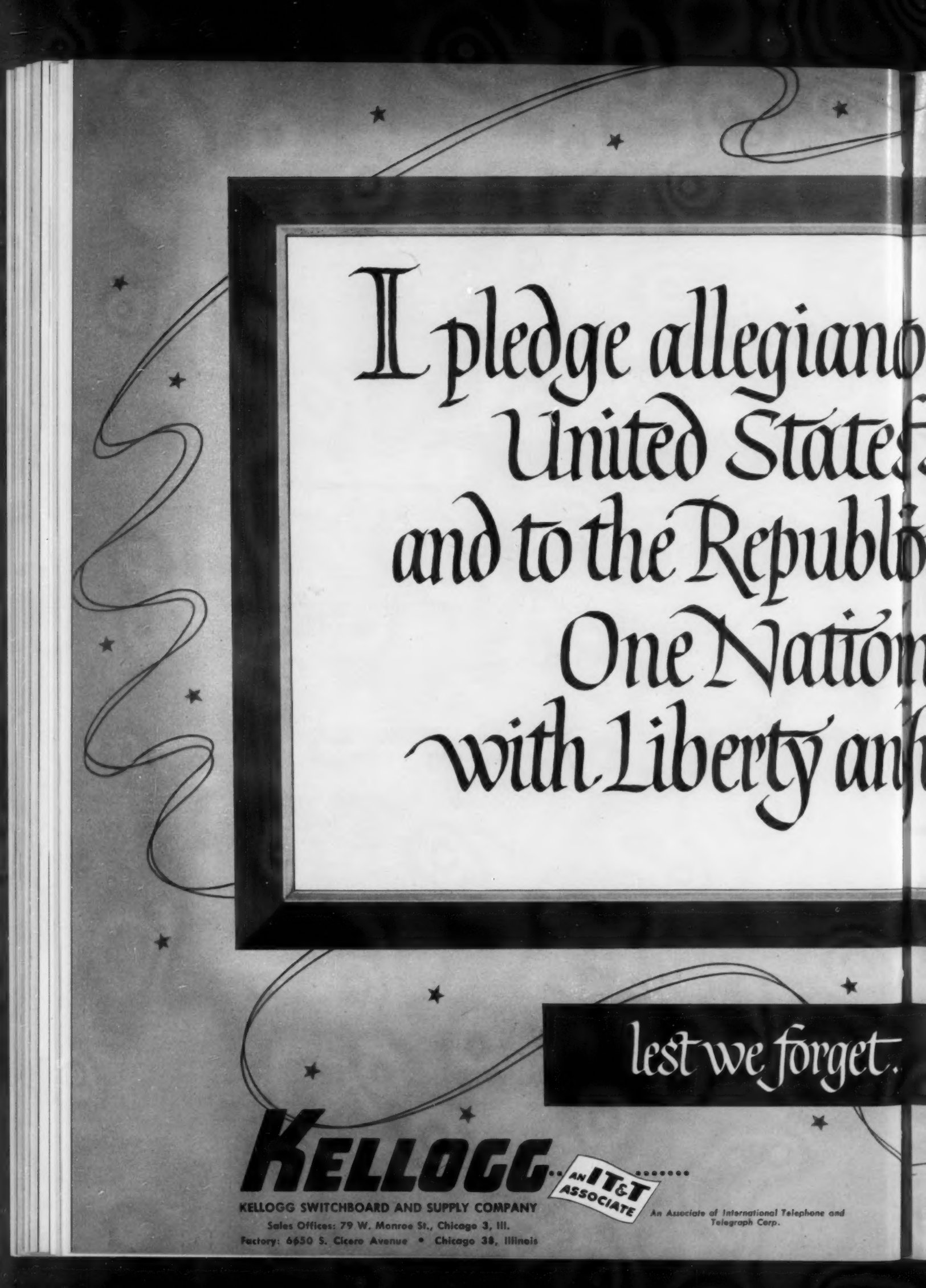
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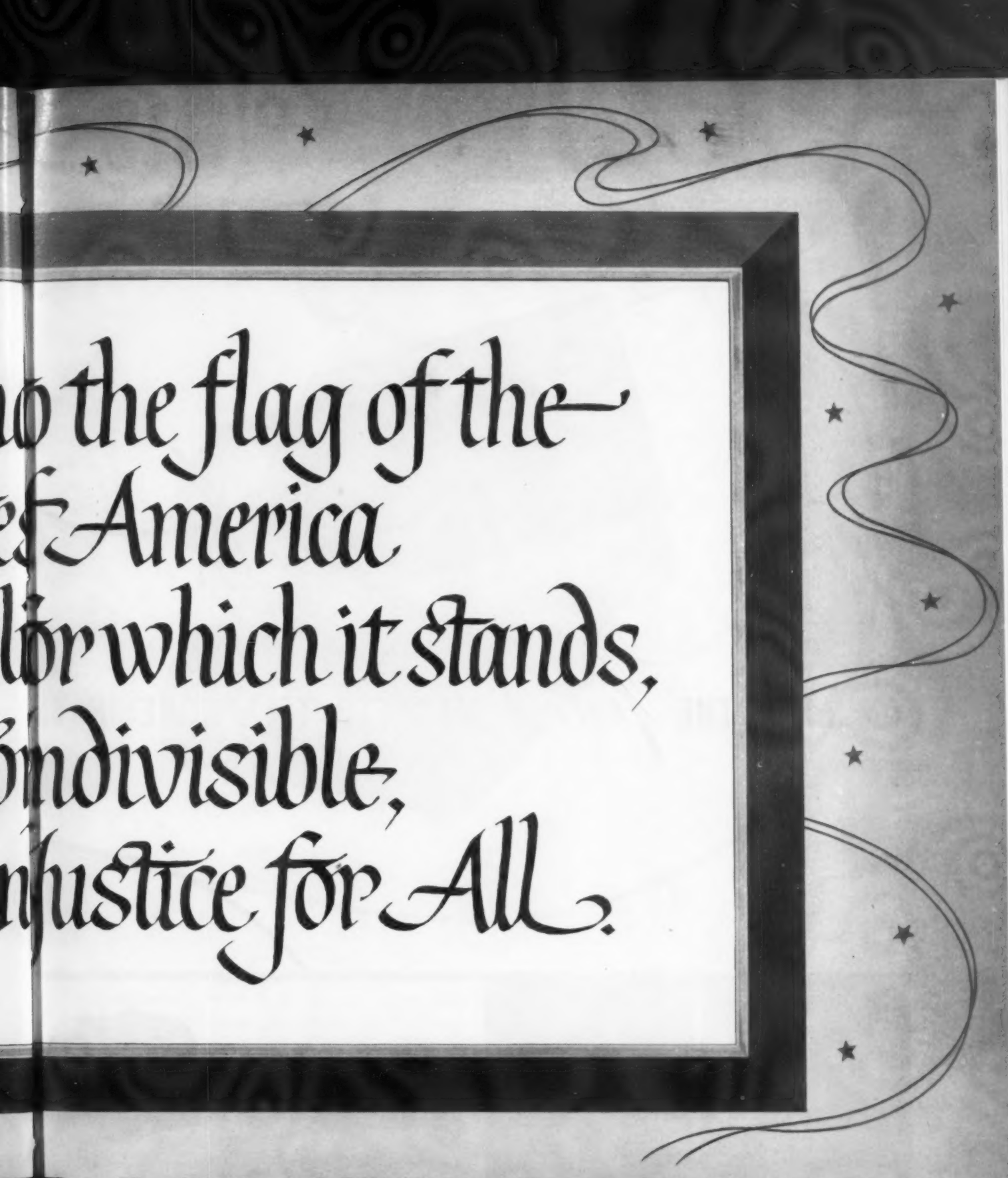
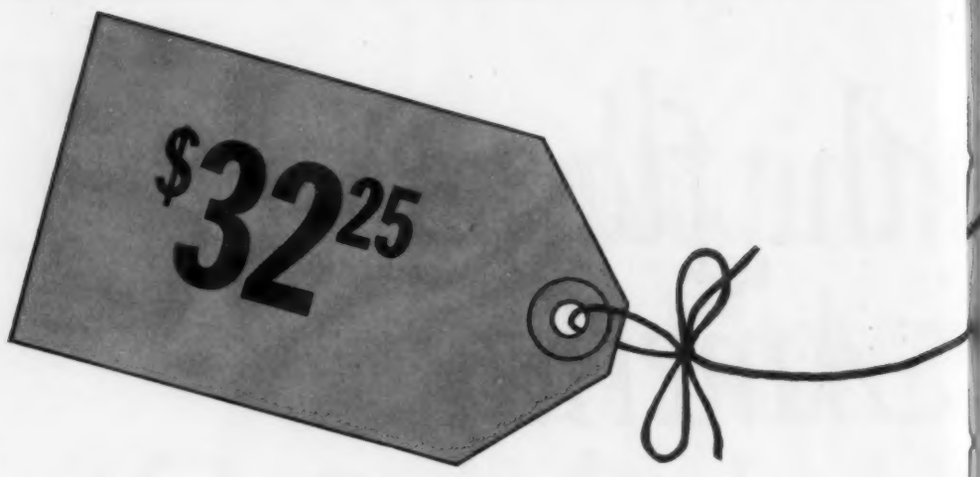
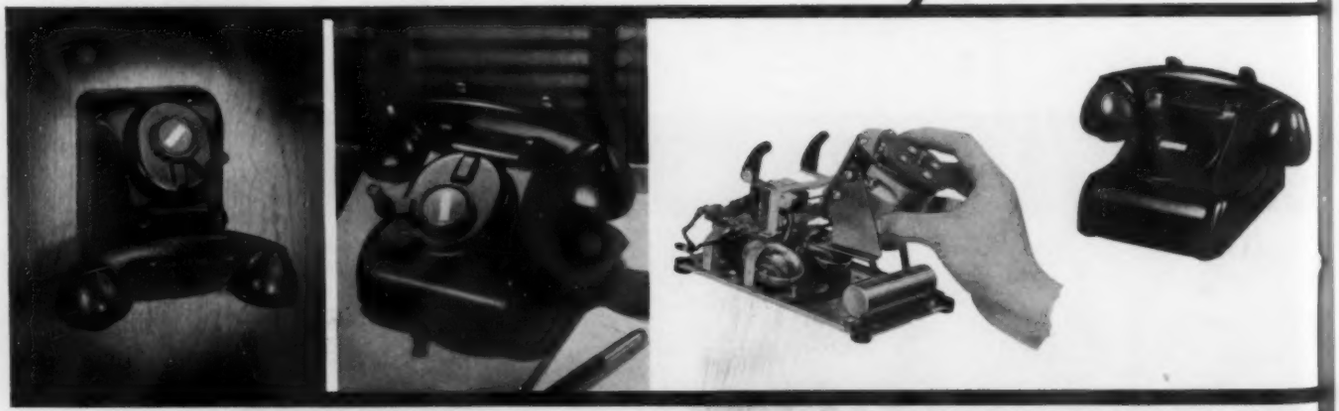


The Pledge of Allegiance, reprinted above, shines bright and clear through the fog of a troubled world. Let us pause in our daily work to remake this pledge --in our thoughts and in our hearts.



...FOR THE *finest* MAGNETO TELEPHONE IN TH



SAME TELEPHONE IS WALL OR DESK MODEL

You can use your Leich magneto telephone, just as is, for wall or desk installations. This saves on inventory, allows you to give the subscriber his choice.

REMOVE THE GENERATOR AND IT'S A COMMON BATTERY TELEPHO

You don't have to worry about this Leich telephone becoming obsolete if your exchange is converted to common battery. Remove the generator, change a few wires, add a dial blank and you have a modern common battery telephone.

LEIC

THWORLD!

Leich 900 Magneto Telephone

You *can* buy more expensive magneto telephones. But *none* will give you the practical, exclusive features which you get in Leich 900 magneto telephones.

Your Leich 900 telephone can be used for either wall or desk installations. No changes or additions are necessary.

If your exchange is converted to common battery, you remove the generator and your Leich 900 is a common battery telephone.

Your subscribers will be tickled pink with this modern, compact magneto instrument. They'll like the true-to-life transmission and reception, the convenient, easy-to-turn generator crank.

Not only will you save on first costs — but this Leich 900 will perform faithfully for many years, with a minimum of maintenance.

Thousands of magneto exchanges are using it. They tell us it's the real answer to their needs for a modern magneto instrument . . . and they like the idea that it can also be used when and if they convert to common battery or dial operation.

If you haven't tried the Leich 900 magneto telephone yet . . . we urge you to now. You'll thank us later for some good advice. Leich Sales Corporation, 427 W. Randolph, Chicago 6, Illinois.

IC ANUFACTURERS OF TELEPHONES, SWITCHBOARDS AND RELATED APPARATUS SINCE 1907

FLASHES AND PLUGS

COULD BE. "I'd like the telephone number of Stanislaus V. Drenckevdodevitskivitz at 51536 Cockatauwapua Blvd.," the man told the information operator.

After a pause, the operator said, "We have a Stanislaus V. Drenckevdodevitskivitz at 51536 WEST Cockatauwapua Blvd. Is that the one?"

• • •

LOVE'S EMERGENCY. Slamming down the telephone receiver, a Wisconsin doctor rushed to the hall closet for his kit.

"What's up?" asked his teen-age daughter, Joan.

"Emergency," the doctor replied, heading toward the front door. "A man by the name of Johnson—says he'll die if he doesn't see me right away."

"Hold on, Dad," said Joan, an impish look on her face. "I think that call was for *me*."

• • •

SHARK OF THE EVENING. He was one of those night club habitues who, once he'd started on a large evening never wanted to call it quits.

It was well past two on a Sunday morning when he telephoned a very lovely young lady, figuring she'd probably have returned from her own painting of the town. "I'm at the Club Nightingale," he explained. "How about grabbing a cab and coming down for a nightcap?"

"Why, it's almost three o'clock," she said. "You must have the place all to yourself!"

"Not at all," he assured her. "There's another couple here. He's stacking the chairs on the tables and she's running the vacuum!"

• • •

ALAS! A-LAUGH A DAY. Vienna telephone owners will soon have their daily chuckle guaranteed.

By dialing a certain number they will be able to hear the "joke of the day" recited by an experienced humorist.

The Vienna Telephone Co. already provides children with fairy tales, perplexed housewives with a daily menu selection including costs, musicians with the perfect "A"-pitch, sports fans with results, not to speak of weather forecasts and other information services.

• • •

WINGED WIRES. From Chesterfield, England, comes word that a large bird, believed to be the first albatross to reach Britain in 55 years, arrived and immediately became entangled in telephone wires.

The Royal Society for the Prevention of Cruelty to Animals freed the bird, which was 2½ feet long and had a five-foot wing spread.

THANKS FOR PROMPT RENEWALS

TELEPHONY wishes to thank subscribers for sending in subscription renewals promptly as this helps considerably in keeping mailing list up-to-date and eliminates the necessity of sending second notices.

Telephony

THE JOURNAL OF THE TELEPHONE INDUSTRY

September 13, 1952

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INTERNATIONAL HARVESTER COMPANY • CHICAGO

Look for these International Truck exclusives:

- Silver Diamond valve-in-head truck engines are rugged, packed with extra power. Engineered to save you plenty on operating and maintenance costs.
- New green-tinted, non-glare safety glass available in Comfo-Vision Cab. One-piece, full-vision windshield.
- Super-steering system — more positive control. Wider front axles make possible full 37° turning angle for easier handling and maneuverability.
- Wide variety of light-duty models — ½, ¾, and 1-ton sizes—GVW's from 4,200 to 8,600 lbs. 115, 127, 134-in. wheelbases. Panel, pickup, stake and many other types of bodies.

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SEE YOU AT THE POLLS

INTERNATIONAL TRUCKS

"Standard of the Highway"

International L-120 series with special service-utility bodies — 7.9 and 8.6-ft. lengths. 115 and 127-in. wheelbases.

IN THE NATION'S CAPITAL

BY FRANCIS X. WELCH
WASHINGTON EDITOR

Telephone rate cases main battleground in commissions' fight to cope with inflation. REA increasing telephone loans. Japan's first television service under private enterprise.

TELEPHONE rate cases continue to be the main economic battleground in the regulatory fight to cope with inflation. Second comes transit carriers, with costs so out of balance with revenues that they often do not even ask for fares sufficient to yield a reasonable return on investment. They are satisfied, for the present, to make ends meet.

But that is the road to eventual bankruptcy and industrial stagnation. The telephone industry cannot afford to jeopardize its basis for much greater expansion in the future. It must insist on a reasonable return. Gas and electric utilities still manage to absorb increased costs through expanded volume of sales. But telephone companies, for obvious reasons, cannot do likewise. Hence, the problem of the state commissions in maintaining a balance between what the telephone companies want and what they can have without developing too many consumer protests.

The Ohio Public Utilities Commission is credited with a recent peaceful compromise of the Ohio Bell Telephone Co. case being protested by 17 of the larger Ohio cities. The company sought to increase its rates last July by $23,100,000. But recently it agreed to accept an increase of $16,750,000. The commission, believing that time and money could be saved by the state and the communities if primary discussions were on an informal basis, called for the meeting of company representatives and protesting parties. The increase is calculated to yield a 4.9 per cent return on a rate base of $442,532,169.

In Pennsylvania, the public utility commission has blocked, for an additional three-month period to Dec. 7, a $31,706,000-a-year rate increase asked by the Bell Telephone Co. of Pennsylvania. The Bell company originally filed the increase to go into effect last Mar. 7, but the commission held it up six months to Sept. 7 for investigation and public hearings.

The Missouri commission has adopted a new policy of treating tax reserves of a public utility as being available for use as part of the working capital of the company, thereby reducing the amount allowed for such capital in the utility's ratemaking base, in a valuation case involving the Central Missouri Telephone Co., Warrensburg, Mo. In this action, the Missouri commission followed the lead of the Federal Power Commission in scaling down allowances for working capital, as part of a ratemaking base, to the extent that tax reserves were available for use as cash. The commission, in fixing a rate base of $1,070,920, granted a rate increase of $74,000 a year but reduced a proposed $85,000 working capital allowance to $36,000 for this year, because tax reserves were available to the telephone company.

REA Doing All Right

President Truman kicked off his first "whistle stop" tour with a Labor Day address at Milwaukee. As expected, he hit the power companies pretty hard. He tried very strenuously to tie up the Republican congressmen of the 82nd Congress with the power companies. He said that "80 per cent of the Republican congressmen time after time voted at the bidding of the private power lobby." He also said that these same Republican congressmen had voted to emasculate appropriations for loans by REA.

It is difficult to understand just how this checks with the fact that REA appropriations for this fiscal year square very well with President Truman's own budget request. Agriculture Department appropriations were passed by Congress without a dissenting vote being registered. But then this is a campaign year when you cannot expect hair-line precision in all the arguments and statements being used by either side.

The odd part about the so-called "power issue" today is that neither of the major candidates themselves have paid much attention to it. Republican General Eisenhower has made broad references to the need for public projects but also to the dangers of centralized federal development. Democratic Governor Stevenson has frankly said that he did not know much about the whole subject but hoped to learn more and have more to say about it before the campaign is over. There is little doubt that he will do so.

Last May, before very many people thought of Governor Stevenson as a presidential candidate, he told an Oregon audience that it was wrong for the federal government to destroy private enterprise by direct federal development. He said he preferred the federal government in the role of umpire and that direct federal operation could only be justified where private enterprise cannot, or will not, do the job. But that was last spring, and there is little likelihood that Candidate Stevenson will continue very much longer to talk like Governor Stevenson of the pre-Chicago days. He is under heavy pressure to swing left on the power issue, just as he has already swung left on the Taft-Hartley and tidelands issue.

As for REA, the year-end 1952 fiscal reports were released last week and they do not show that there has been any interruption (Republican or otherwise) in that agency's steady march towards more loans for both electric and telephone service.

According to these figures (which are complete only up to the end of last June), REA telephone loan allocations reached $82,000,000—about double the amount that had been allocated at the end of the fiscal year 1951. Not only is REA stepping up its telephone loan program, but it is getting plenty of applications. The Agriculture Department reports that REA had pending about 500 loan applications for rural telephone service, totaling $89,000,000. So far, a majority of these loans (110) have been to private commercial companies rather than cooperatives (80).

Somewhat more recent figures (134 private companies and 82 co-op loans) show that more money has actually been allocated to the co-ops ($40,873,-

000) than to the private companies ($38,937,500). In other words, cooperatives averaged about half a million dollars per loan as compared with $200,000 on private company loans. There is some evidence that the number of cooperative loans will eventually overtake the number of loans to private companies. It was recently estimated by the United States Independent Telephone Association that almost 275 Independent telephone exchanges have been acquired by telephone cooperatives with funds obtained from REA loans. All told, REA passed the 2.5 billion dollar mark in electric loans over its 17 years of existence.

Future Telephone Service

To read newspaper reports about telephone service in some foreign countries, one would think that our good old American telephone service is behind the times. But actually all the fancy frills which get so much free publicity for the Vienna Telephone Co. (Austria, that is) and such recent stories as the one from London about combination telephone-television are so much frosting on the cake. They make a poor substitute for modern fast conventional telephone service which is within the reach of nearly everybody, as in the case of our United States variety.

American tourists now coming back from Europe in great numbers report that telephone service abroad is a great improvement over the old comic vaudeville variety of pre-World War II days. But once out of the big cities and first class hotels, the coverage is pretty sketchy all over the continent. The neighborhood tavern and doctor are still called upon to give free message service for a great portion of the civil population in many European villages.

But it is true, apparently, that some of the foreign telephone systems actually go in for unconventional "special services" which sound strange enough to get filler space in our American newspapers. This writer was a little suspicious of the repeated newspaper stories about Vienna telephone subscribers being able to get information about almost anything in the World Almanac right over their own telephone.

A recently returned U. S. Army officer, who put in some time in that city, vouchsafes, however, that the Vienna Telephone Co. actually does put out the following 10 "special services":

(1) Time service.
(2) Weather service.
(3) A short recap on newspaper headlines.
(4) Agricultural news and reports.
(5) Sport results.
(6) Financial and market reports.
(7) Children's fairy tales.
(8) Daily menus for puzzled housewives, including estimated costs.
(9) For musicians—a perfect "A" pitch.
(10) This is the latest—believe it or not—"A joke of the day."

Also by making special arrangement, a Vienna telephone subscriber can get library research service, entitling him to call up at any hour and get the answer to a question which he is too lazy to look up in his own encyclopedia. Aside from the fact that less than one-fourth of the city's population have telephones, my officer friend says the service is pretty good by European standards. He adds that a good many people actually patronize the odd special services because of the lack of anything else to do with their spare time. In other words, Vienna has become pretty dull, as compared with the brilliant gaiety of the Emperor Franz Joseph era when the Strauses were in full bloom.

The Associated Press story out of London on Aug. 27, told of a television-telephone demonstration at the annual British radio show as if it were something entirely new. This writer recalls former AT&T President Walter Gifford announcing a similar demonstration of television-telephone before World War II. That means it was long before television was commonly distributed anywhere.

The London demonstration, billed as "the latest invention of British radio engineers," was rigged up on the convention floor in such a way that a party calling from one end could see the face of the party calling from the other end, and vice versa. The effect was said to be somewhat similar to holding a conversation with someone speaking to you right out of a movie screen. The estimated cost of the installation, per station, was $2,800, which means that you will not see them around the Strand or Piccadilly pubs for quite awhile yet.

Here in our own country, Bob Considine, writing for International News Service, recently described an even more startling general description, under a New York dateline. It was all about "Aircall." This is a service (recently permitted to operate by the FCC on an ultra-high frequency) for notifying doctors, diplomats, airplane pilots, police and health officials, and others—who honestly cannot call their time their own—that they are wanted on the nearest telephone.

It works something like a one-way "Dick Tracy" wristwatch. The "subscriber" whether he is watching a ball game, playing golf, or simply sitting around emptying glassware, takes a little dingus out of his pocket every so often and listens to it. If he puts it back in his pocket and goes on emptying glasses, all is well. But if he makes a bolt for the door, and roars off in a cloud of dust, it means he has heard his "code" signal.

All this, of course, is old stuff to electronic engineers who, years ago, knew the possibilities of communication service along these lines, and many other lines still to be explored. Dr. Harold S. Osborne, retiring chief engineer of the AT&T after 42 years of service, tells all about telephone possibilities which stagger the imagination even of the space world cartoonists.

"Let us say," Dr. Osborne recently said, "that in the ultimate whenever a baby is born anywhere in the world he is given at birth a number which will be his telephone number throughout life. As soon as he can talk he is given a watchlike device with 10 little buttons on one side and a screen on the other. Thus equipped, at any time when he wishes to talk with anyone in the world he will pull out the device and punch on the keys the telephone number of his friend. Then, turning the device over, he will hear the voice of his friend and see his face on the screen, in color and in three dimensions. If he does not see him and hear him, he will know that his friend is dead."

Can't you see the future baptisimal scene? The minister takes the baby in his arms and says: "I christen thee BUtterfield 4-7647!"

But Dr. Osborne has comfort for those who do not want to look so far ahead. More important for the telephone business in the near future is the extra direct line telephone service for every home, especially those with teenagers in it. Also, there are short range walkie-talkie telephones, connecting with direct telephone service and other improvements which could easily multiply the size, volume, and convenience of present day telephone service right here in the United States.

Just by way of concluding this somewhat out-of-character discussion (for this writer) of technical communication developments at home and abroad, we have a late dispatch on television in Japan. The best part of it is that Japanese television will be private enterprise, and not run by the government along the lines of Japanese telephone service which has been a joke for many years. The regular scheduled television in Japan was slated to commence this month, with a selected audience of 3,000 Japanese families all over in the Tokyo area. The fact that it will

(Please turn to page 37)

REA ALLOCATES $2,291,000 FOR COMPANIES AND CO-OPS IN SIX STATES

The Rural Electrification Administration approved seven telephone loan allocations during the week of Aug. 25 to 29, totaling $2,291,000.

The REA telephone companies and co-ops are planning to use the funds to furnish modern telephone service to 2,567 subscribers now without telephones, and improved service to 2,867 present subscribers in 14 counties. Additional facilities to be constructed include 875 miles of new line. The REA loan will also finance the rehabilitation and integration of existing and acquired properties.

On Aug. 28 the REA also approved a loan contract with the Hill Telephone Corp., Levant, Me. (successor to the Levant Telephone Co.), in the amount of $83,000.

On Aug. 25 Steelville (Mo.) Telephone Exchange was allocated $503,000 to improve and expand rural facilities in Crawford, Washington, Dent and Iron counties.

The borrower, a new non-profit organization, proposes to acquire the properties of the Steelville Telephone Co., now furnishing magneto service to 334 subscribers over 15 miles of line and switching service for 180 subscribers who own their own lines. Borrower plans to use the loan funds to build 358 miles of new line, rebuild all of the acquired line, convert the Steelville central office to dial operation and add a new dial office at Cherryville. As a result of the new construction and improvements, service will be provided the 334 subscribers on the acquired line, plus the 180 switchers, and extended to 456 additional rural subscribers now without telephones. There will be no toll charge for calls between the two central offices of the system.

Completed, this new telephone system will be operating 373 miles of line furnishing telephone service to 970 rural subscribers.

• • •

Adams Telephone Cooperative, Camp Point, Ill., on Aug. 27 received an allocation of $509,000 to improve and expand service in rural areas in Adams and Hancock counties.

As a nucleus, the newly-formed cooperative proposes to acquire the properties of the Mendon Telephone Co.; the Urmaoga Telephone Co., Ursa; and the Wessel & Mann Telephone Co., Loraine. These three companies are now furnishing magneto service to 765 rural subscribers over 189 miles of line. With the loan funds, the co-op plans to build 78 miles of new line, rebuild 151 miles of the acquired line, convert the central offices at Mendon, Ursa, Lima and Loraine to dial operation, and install a new dial office at Meyer. As a result of the improvements and the new construction, 468 additional rural families and establishments, now without telephones, will receive dial service. There will be no toll charge for calls between the central offices, according to present plans.

Completed, this system will provide dial telephone service to about 1,230 rural subscribers over 232 miles of line.

• • •

Also on Aug. 27, Clear Creek Mutual Telephone Co., Oregon City, Ore., was allocated $134,000 to improve and expand rural telephone service in Clackamas County.

Presently, this company furnishes magneto service to 275 subscribers over 77 miles of line. With the REA loan, the borrower proposes to build five miles of new line, rebuild 72 miles of existing line, and install new dial central office equipment at Redland. As a result of the new construction and improvements afforded by this loan, 205 rural families and establishments, now without telephones, will receive dial service.

Completed, the system will operate 77 miles of line serving 480 rural subscribers.

• • •

Batholomew Telephone Corp., Columbus, Ind., on Aug. 27 received an allocation of $650,000 to expand and improve service in Batholomew, Brown and Jennings counties. The new organization is a cooperative.

As a nucleus for its system, the cooperative will acquire the Taylorsville Telephone Co.; Pikes Peak Telephone Co.; the Cortland Mutual Telephone Co., and some properties of the Hope Independent Telephone Co., totaling in all 161 miles of line serving 1,091 subscribers.

The loan will finance replacement of existing dial central offices at Taylorsville, Clifford, Hartsville, Grammer, and Elizabethville with modern equipment; replacement of magneto exchanges at Hope and Ogilville with new unattended dial equipment; installation of a new dial office at Stonehead to replace the magneto equipment at New Belleville, and installation of new dial offices at Taggart and Jonesville. All present lines will be rebuilt and 200 miles of new line and nearly 900 new subscribers added.

• • •

Benton Cooperative Telephone Co., Foley, Minn., on Aug. 29 was allocated $321,000 to improve and expand service in rural sections of Benton and Morrison counties.

As a basis for this system, the newly-formed cooperative plans to acquire the following properties: Gilman Telephone Co., now furnishing common battery service to 142 subscribers over 57 miles of line; and 63 miles of line from four service station companies—Northern Rural Telephone Co.; Graham Rural Telephone Co.; Gilman Rural Telephone Co., and Ramey Telephone Co.—on which 92 subscribers are now being switched by the Gilman Telephone Co. The borrower proposes to use the REA funds to build 214 miles of new line and rebuild 100 miles of the acquired line. Dial central offices for the system will be located at Rice and north of Gilman. As a result of the rehabilitation and new construction, the 234 subscribers on the acquired line will receive improved service, and 420 new subscribers will obtain service for the first time. Service without toll charge is contemplated for both central offices with adjacent trade centers.

Completed, the Benton Cooperative Telephone Co. will furnish service to 654 subscribers over 314 miles of line.

• • •

Also on Aug. 29, Farmers Mutual Telephone Co., Madison, Minn., received $94,000, which is the second loan to this borrower.

In addition to completing the construction planned in the first loan, these funds will finance the construction of 20 miles of line to furnish service to 68 subscribers not included in the first loan.

The improvements and expansion which will be possible under the two REA loans will result in modern service for 378 rural families and establishments over 165 miles of line in Lac qui Parle County.

Eastern Rowan Telephone Co., Granite Quarry, N. C., was allocated $80,000, which is the second loan to this borrower.

(Please turn to page 30)

PUBLIC INTEREST PROFIT

An industry that bears the shackles of an inadequate profit cannot do its best — a good telephone profit is a public need.

THE announced subject of my talk is "Public Interest Profit." I made about the same talk recently before the California State Bankers' Association.

But for them I had a different title: "Banking Merchandise . . . or . . . Stalin is Laughing in His Vodka Tonight."

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Others have been joining us, until now there is a great chorus of protest going up over the land. The chorus is, however, badly out of tune. In the background is the recurrent theme—a chant to hold the line. But other voices ask where is the line that is to be held. And there are wails of doubt as to who is to do the holding. And if there is a line that is going to be held, the man who finds himself at the end of the line is going to be badly hurt.

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I am all for holding the line, but I want to be sure that it is a good line and a strong one. How high the line or how low, how long or how short, is not as important as how well-balanced, how adequate it is to do the job intended. The swollen parts must be reduced, the constricted parts loosened up, for only through a healthy, well-balanced line may we expect the life blood of business to flow equitably and effectively for the benefit of all.

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San Francisco, Cal.

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I expire as a sacrifice to their patriotic efforts against inflation?

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Dollars a Measure—No End Product

Perhaps we should get on common ground as to what inflation is. There are many definitions. One gaining general acceptance is: "Too many dollars chasing too few goods" and I think that's as good as any.

It's hard to realize that having too many dollars in circulation can result in anything bad. For it is easy to lose sight of what dollars actually are.

We are too often inclined to think that dollars are an end product in themselves. They are not. They are just a measure of an end product—a measure of value. Dollars or lira or francs or rupees or pounds, or whatever you want to call them, are merely tickets that represent something else. That something else is productivity. As soon as dollars that are not matched by production start flowing into the economy, trouble is brewing.

I will not be foolhardy enough to detail my views as to all that has contributed to creating inflation. Nor will I bore you with my opinions of the government practice of failing to redeem its IOU's in real value, a practice which goes, I believe, under the polite term of "monetizing our public debt."

I wonder sometimes what might happen if we in the telephone industry were to monetize some of our debt by paying it off in crisp, new paper that didn't mean anything. If we tried it, I know you and I couldn't get away with it. But we don't hesitate to let our government get away with it. Under our surprising double standard, we allow our own government—over which we claim control—a set of business morals we would not condone among ourselves as individuals.

You know, no one really minds inflation until it catches up with him. In some cases inflation grabs hold at the very start; in others, there is enough of a lag between cause and effect so that people forget or fail to see the terrible danger that lurks within the wage-price spiral or in the other symptoms of the inflationary disease.

The Pay-In and the Pay-Out

Sometime ago I remember listening to a story about a man I shall call Karl. Karl went through the various stages of inflation in Germany. In World War I, he was working on a farm some miles outside Berlin. As inflation advanced, Karl asked to be paid by the week because he found that if he waited two weeks for his pay, the money he received for the work at the end of the two-week period wouldn't buy very much. Prices went up that rapidly.

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There is a parallel between Karl's frantic efforts to keep ahead of inflation and the efforts of the telephone industry to do much the same thing. The 1940-dollar has declined in value year after year, until presently it is worth only half its former value. In an effort to offset our rising costs, we have asked utilities commissions on many occasions since 1946 for adjustments of telephone prices. But the lag between our requests and the actual repricing, and the limited amounts of the increases—consistently less than our needs—have kept us behind the inflationary spiral all the time.

As bad as the primitive barter system is, the telephone industry would be better off with it. If we could get our telephone bills paid in baskets of tomatoes, buckets of milk, tons of steel, or what have you, at least we'd be consistently taking in the kind of value we are putting out. This would not be convenient for our customers. It would create some problems in handling collection. But at least it would solve our all-important problem of inflation. In fact that is all I am asking for: That for Pacific Telephone as a regulated public utility the pay-in be on the same relative basis as the pay-out; in short, that we be paid for telephone service in a medium of exchange that is fair *both ways*.

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example, is already losing its popularity with the well-advised investor. Yes, we are losing our place in the race for investors' money. Our apparent inability to cope with inflationary forces is not a record that causes private investors to beat on our door begging us to place more of their money for investment. This is the visible evidence of the unbalance created by inflation and the lag in repricing our product.

Institutional investors, life insurance companies, pension trusts, college endowments and others are shying away from Pacific Telephone. Such well-advised investors are the bellwethers of the market. We cannot stand idly by until the investment trend away from telephone securities has reached a disastrous climax.

Pacific Has Served Well

Pacific Telephone's investors together with those of the Independent companies have made our postwar growth possible. With pardonable pride in our industry, we can call it an amazing record.

The telephone companies of the West Coast have a present total of 5½ million telephones and can point to a gain since World War II of nearly 2,400,000. This gain over a period of six and a half years is about equal to all of the telephones in all of the countries of all Central and South America placed there in all of the more than 75 years since the telephone was invented.

Over a billion dollars has gone into Pacific Telephone's construction program alone since the war. This is equal to the initial cost of 31 Golden Gate bridges. We have had to do this tremendous job to keep pace with Pacific Coast growth. And the end is nowhere in sight.

Yet we are somewhat in the position of the whimsical fellow who started out to sell apples for seven cents apiece which cost him 10 cents. You may recall his answer when a friend said, "But if you pay 10 cents for each apple and sell it for seven cents, how do you expect to make any money?" "I don't know about that," goes the now-famous reply, "but just think of how many apples I will sell." In the prewar years we were increasing our investment $170 for each new telephone added. Since the war, we have been forced to make an investment of $430 every time we add a new telephone. We're in the position of trying to sell telephone service costing in investment $430, for telephone prices designed to cover just a little more than a $170 investment per telephone.

Yes, we have had to raise vast amounts of investment money to make our postwar program go. Our most serious concern is with our ability *to keep on* raising investment money. If we fail to do so, we will fail the people of the coast.

Loss of Balance May Destroy Economic System

Lenin is reported to have said in the early '20's, "Some day, we shall force the United States to spend itself into destruction."

I'm sure you've all seen or heard that quote in recent months. I might say I tried to get a check on that quote —where, when, under what circumstances—but so far my students of Lenin haven't been able to track it down. Perhaps I've got the wrong students or maybe Lenin never said it. I mention this only because I want you to know I give you research with my talk. Anyway, if he didn't say it, he might have. Certainly his present-day disciples make it clear they wish to do just that.

As a matter of fact it isn't necessary to spend ourselves into destruction. All that is necessary is to start the procedure and throw the economic system badly out of balance. That's the quickest and surest way of reaching destruction.

Telephone Prices Are Regulated

Telephone prices are under government regulation. If the regulation works well, it would maintain equitable prices for telephone services that will keep our charges in step with prices generally so as to insure a free flow of investment money. Our pricing hasn't worked out that way. Our costs of doing business have doubled since 1940; our prices have increased only about a third.

In a situation of this kind we should look not only to increased revenues but to decreased expenses. It means we must sharpen our pencils and our wits to make all wise economies. And this we have done. But, when we are confronted with costs which have doubled, it is asking too much to expect that the difference can be made up by economies.

Comments on Business Letter Writing

Speaking of sharpening one's wits to make wise economies, I'd like to digress from my main theme to tell you about a little booklet we recently got out. It's on business letter writing.

Letter and report writing mounts up in any organization. In Pacific Telephone, I suppose we spend many millions of dollars every year in this activity. If we could speed up the handling of this work even by a small percentage, the resulting saving would be worthwhile and if we could speed it a good deal, the saving would be considerable.

I have been impressed that in Pacific Telephone we may have been handling this activity the expensive way. First, we strive too hard to be eloquent and rhetorical, and secondly we strive too hard to be purists. I have no objection —in fact I admire—the eloquent and the pure in English. But not—no, not —on company time and expense.

If a letter or report is simple, friendly and easily understood, that should be all that is necessary. Such letters can be written much more quickly and at less expense than the more eloquent type. We are a business enterprise, not an educational institution.

So I thought I'd see if I could get an experiment started along this line in my company. This booklet is the result. The experiment suggested is to forget all about letter writing formulas, business phrases, important words and rules of grammar and then say what you have to say as simply and directly as if you were talking to some one face to face.

I have hopes that we will be able to speed up the handling of our correspondence, at less expense, by following these suggestions.

The booklet was intended, of course, for use only within our company. But it somehow got around and we have received hundreds of requests for copies from all kinds of business firms and schools.

Plea for Good Earnings Not Self-Serving

But to get on. My plea for good telephone earnings is not a self-serving one. Good earnings for our business are good for everybody involved in the telephone business—and just about everybody *is* involved in the telephone business these days.

Good earnings mean the kind of a profit that enables us to do more than just get by. Good earnings provide investors with sufficient incentive and confidence in the future so that they will keep on putting all the capital into the property that can make for better and cheaper service.

What I am asking for is a *public interest profit*—one that enables the industry to plan and act for the long pull. It certainly is in the public interest to do an economical job by avoiding the waste of short-term month-to-month planning and building which is all that can be done with an inadequate return. We ask for a good profit so that we may make tomorrow's telephone bill buy more and better telephone service for our customers. We want the chance to do our utmost to develop

(Please turn to page 34)

THE RIGHT TOOLS — right when they're needed

For prompt, efficient completion of telephone line jobs, make sure your linemen have the right tools—*right* when they're needed.

And, for the easiest way to obtain this equipment, make sure you order from Graybar. On a single transaction, you can get pliers, wrenches, trimmers, shovels, and all the other tools needed for line construction and maintenance—even trailers, and splicing carts.

By ordering through Graybar, you save the time and expense of multiple inquiries. You get products that are dependable and give long service-life—products that have been tested and accepted by companies like yours throughout the nation.

Remember, too, that your local Graybar Representative is a convenient source of information on all of the other materials required by the independent telephone industry. For help in solving unusual technical problems, you can arrange for the help of an experienced Graybar Outside Construction Specialist or Telephone Specialist.

Owned solely by its operating and retired personnel, you can always expect from Graybar that extra bit of attention of folks who are anxious to please. *Graybar Electric Company, Inc. Executive offices: Graybar Building, New York 17, N. Y.* 215-239

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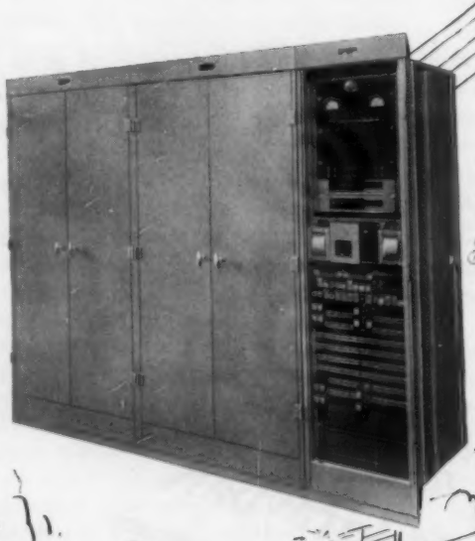
NORTH CX-100 All-Relay Automatic boards start serving small communities with a few lines, expand readily as your needs expand.

NORTH CX-200 All-Relay Automatic boards provide dependable communications for larger towns. Additional capacity may be added in suitable steps.



WHETHER your system is a small exchange, a big one or a network, minimized supervision can do a lot to stabilize or improve net returns on plant investment.

The first and obvious step in this direction is to provide automatic equipment. We would like an opportunity to make it also obvious to you that the *right* automatic equipment is North All-Relay . . . to *show* you the basic simplicity of Exchanges in which all "switching" is handled by pre-wired, pre-adjusted relays with mechanical motion reduced to near-zero . . . to *show* you why the use of double, precious metal points for each contact reduces the chance of

with NORTH

a better NETWORK-

NORTH CX-1000 All-Relay equipment initially adequate for your large exchange, expands easily to large city capacity. North cord or cordless toll boards improve supervised service.

ailure to a one-in-a-million ratio.

No extra supervision required *behind* the board! North Relays are the error-free, no-sick-leave brain cells which handle one or one-hundred calls er hour at the same low-cost, sure-completion ratio.

No extra supervision for local-rated or short-haul alls on the *front* of the board.

The same net-protecting freedom from supervision can apply to automatic station-to-station toll alls by adding North AuTollizer equipment . . . also perated principally by simple relays.

All told, there is a lot more evidence of North tra simplicity than can be described here. It all dds up to proof of the basic point that you can get etter net, with a better network if you make *all* of our equipment automatic, provided you standardze on the *right* automatic equipment . . .

All-Relay EXCHANGES

THE NORTH ELECTRIC MANUFACTURING COMPANY

Originators of **ALL RELAY** *Systems of Automatic Switching*

601 South Market Street, Galion, Ohio, U.S.A.

THE PLANT MAN'S *note book*

BY RAY BLAIN TECHNICAL EDITOR

TELEPHONE switchboard operating rooms have certainly been improved during the past decade. First, they were air-conditioned, and then fluorescent lighting was installed and used to advantage. Next, soft background music was provided and the ceiling was acoustically treated.

Now we understand that, in some cases, the air is automatically perfumed by electrically operated atomizers. We cannot help but wonder why there continues to be a shortage of operators.

• • •

We have witnessed so many cut-overs to new dial telephone systems, down through the years, that, like conventions, they ceased to be a novelty a long time ago—or, so we thought. However, the one we attended at Ft. Jay, Governors Island, N. Y., recently happened to be an exception, thanks to the efforts and ingenuity of Col. Francis E. Kidwell, Signal Officer of the Headquarters First Army Area.

The cut-over to the new 1,800-line dial system was without incident and, after the workings of the new exchange had been explained to the assembled guests, we all retired to the Cable Ship NILES, tied up at South Dock.

We then made a two-hour cruise around New York harbor on the NILES, past the floodlighted Statue of Liberty and many other interesting sights of that big city. Refreshments were served aboard and we were invited to make use of the marine telephone facilities recently installed on the NILES. The writer placed a call to Mrs. Blain in Washington and found the transmission excellent.

In addition to the staff of the First Army, and the members of Colonel Kidwell's official family, there were several representatives from the New York and New Jersey Bell Telephone companies. E. E. McCorkle, government representative of the Automatic Electric Co., also was in attendance.

After the festivities were over, we caught the ferry to New York, a cab to LaGuardia Field, and a midnight plane back to Washington. It was our good luck to have a clear night and the lights of New York City from the air were a truly wonderful sight, even more beautiful than from the boat in the harbor. Later, we picked up the lights in Philadelphia, Baltimore and Washington, all beautiful. Minutes later, we landed at National Airport, tired but happy and pleased that we were able to have attended this particular cut-over which proved so different.

• • •

The writer recently attended a reception after the cut-over of a new Signal Corps dial telephone system at Ft. Belvoir, Va. A big cake, a part of the refreshments served, carried the lettering "Good Dialing."

• • •

It has been said that the average poor man is probably better morally than the average rich man, as nearly all sins are expensive.

• • •

Bell System's expenditures for construction of new telephone plant in the past six years alone amount to more than the total investment in plant at the end of World War II.

• • •

The Pennsylvania turnpike makes good use of mircowave and two-way radio to control traffic and maintenance along its 300-mile route.

Microwave links extend the range of two-way radio communication with police, maintenance and management cars. These links beam the two-way radio signals to 10 points along the turnpike from which VHF antennas provide blanket coverage over the entire turnpike.

• • •

We wonder why someone does not invent a clock that will run accurately in an automobile, and bath room scales that will give one's true weight consistently.

• • •

Some relatives of the Blain family recently returned from England on the S.S. UNITED STATES. They report the ship comfortable, it does not roll and is practically free from vibration, and the telephone service is excellent.

• • •

The conference room in many modern offices is without a telephone. This may explain the reason why so many executives spend so much time in conference.

• • •

Radio relay systems were providing 450,000 miles of telephone channels at the end of 1951 which amounts to a distance equivalent to 150 times across this country.

• • •

It is claimed that nothing is easier than fault finding. No talent, no self-denial, no brains, no character are required to set up in the grumbling business.

• • •

Operating telephone companies everywhere today have a Herculean task to perform in providing telephone service for new building construction. In this connection, future planning by telephone people is hampered because real estate firms are usually most secretive regarding proposed construction plans. In most cases, the land is acquired, building plans approved, and materials ordered before the utility companies are advised as to proposed building construction. Of course, when the first building has been completed, immediate telephone service is expected.

It is to be hoped that eventually real estate firms will learn that they can safely take the telephone company into their confidence and thus be assured that service will be provided with the least possible delay after the building construction has been completed.

PLANT MAN'S QUIZ

Q. In the installation of Ankoseal, plastic-jacketed cable, should the aluminum sheath be grounded to provide protection against lightning or may this grounding be omitted?

A. In order to provide adequate protection and reduce induction and noise troubles, it is recommended that the aluminum sheath of your Ankoseal cable be made continuous by bonding it across all splices. In the event you have more than one cable entering your central office, these should be bonded together inside the building and grounded to the central office bus bar.

For aerial cable, the point where the ground wire is connected and where the cables are bonded together should be as close as practicable to the building entrance. For underground cable, the point at which the ground wire and the bonds are attached between the cables may be in the cable vault or in the office manhole, if it is located near the building entrance.

If you ground the aluminum sheath of the Ankoseal cable at any point other than at the central office, this ground connection should be made at the cable terminals. Some operating telephone companies prefer to make ground connections to the sheath at regular intervals along the line in addition to the ground at the central office. When the cable sheath is grounded in this manner, every effort should be made to obtain a low resistance ground connection.

• • •

Q. What advantages are claimed for the new plastic jars used in the smaller sizes of storage batteries?

A. Plastic jars are as transparent as glass, lighter in weight, are more compact, and possess a much greater shock resistance. The containers and covers are impervious to the effects of electrolyte. In addition, these jars are also annealed for high mechanical strength and heat resistance, and the surface is smooth and easily cleaned.

• • •

Q. In the design of an underground cable distribution system, is it considered advisable to place the main conduit runs in the street or in the parkway between the curb and the sidewalk?

A. Whenever space will permit and a right-of-way can be obtained, we prefer that the conduit run be placed in the parkway. This type of construction is not nearly as expensive as the street location and repairs can always be made without obstructing traffic.

• • •

Q. Will brick manholes prove satisfactory in the telephone plant?

A. Brick manholes will prove to be satisfactory and have been used extensively in the past. However, it is doubtful if they could be "proved in" at the present time because of existing labor costs.

Reinforced concrete is as good, or even better, and the cost will be considerably less. When sectional steel manhole forms and ready-mixed concrete are used, labor costs are reduced to a minimum.

• • •

Q. Why is a station protector considered necessary on a telephone when the parallel type wire drop is only 75 to 100 feet long?

A. All telephone lines — except underground systems—are subject to electrical hazards from both electric power systems and lightning. While it is true that the primary purpose of protecting telephone lines from electric and power lines is to so plan the aerial plant that accidental contact between the two services will be prevented, it is also true that even when the best construction methods are employed, there is no way of being certain that accidental contact can be prevented during storms or other disasters. For this reason, station protectors are the only practicable means of protecting the station apparatus against lightning and possible damage from accidental power line contact.

In general, all telephone stations which are served by aerial lines should have protection if they are subjected to lightning disturbances or accidental contact with power lines carrying more than 250 volts.

• • •

Q. We find that when we purchase standard reels of cable for underground construction, much waste is encountered. Please tell us how this may be prevented.

A. In our opinion, the best method to follow in this connection is to plan your work in detail before the cable is ordered. Then calculate your cutting lengths and order the cable accordingly.

This method is especially desirable when larger sizes of cables are involved.

• • •

Q. Please explain how the riser cables from the cable vault to the main frame should be supported on the vertical run.

A. This may be accomplished in numerous ways, but perhaps the most common method to follow would be to fasten the vertical cables to the vault wall by means of suitable cable clamps. In some cases, hardwood timbers are attached to the vault wall and the cables cleated to them. Also, on some special jobs, conduits are embedded in the building structure to support and carry the cables from the vault to the main frame.

• • •

Q. We shall appreciate your explanation of the purpose served by an insulated joint in a telephone cable.

A. At the present time, the insulated joint is not being used as frequently as in the past, but it is necessary to break the electrical continuity of the cable sheath in order to prevent the flow of foreign current. These joints are generally installed where an aerial cable enters a building, between aerial and underground cable, etc.

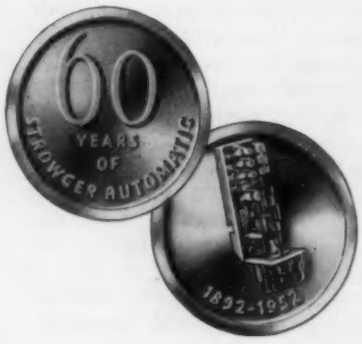
• • •

Q. In planning an underground conduit system for exchange distribution, how may we determine the total number of ducts required in all main runs?

A. We do not know of any set rule for determining these requirements. However, it is our belief that all factors involved should be carefully evaluated and every effort made to forecast the ultimate requirements needed to serve the area. In addition, it is also most important that at least one spare duct be provided for maintenance purposes in addition to the ultimate number of ducts required to meet the expected service needs.

Ordinarily, a spare duct is not considered necessary in a subsidiary run to terminals or buildings since these cables are small and failures in the event of trouble are in most cases complete. In this situation, a spare duct will prove an advantage only in that it would reduce the time required to make repairs. Generally speaking, the resulting insignificant saving would not justify the expense of installing the spare duct on these short runs.

It is most necessary, however, that at least one spare duct be provided on all conduit runs between manholes.



In Offices

Automatic's type 40 Monophone
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Some Fundamental Testing Circuits For The Testman

By L. N. MARTIN

WE HAVE discussed the use of the voltmeter as a trouble testing instrument (TELEPHONY, July 5, page 15) and the testdesk with which the voltmeter is usually associated (TELEPHONY, Aug. 16, page 20).

This equipment requires someone to operate it and a company is fortunate if it has a testman who thoroughly understands the principles of electricity, the testing equipment he is using, and the circuits he is testing. However, the testman does not always have these qualifications. We sometimes find that a company has invested in a very complete testdesk but is not getting the full benefit of its investment because the testman has learned to make only a few simple tests and makes no use of many of the features that have been provided for him.

Then, there is the type of testman who learns to use all of the features of his testdesk by reading the rules and memorizing them but who has no fundamental knowledge of what he is doing. He comes to grief when something unusual comes up — something that is not in the book—and he is completely lost if assigned to a different type of testdesk. We believe that all telephone jobs should be learned from the bottom up.

One of the large Bell companies has a school for testmen and we have examined an outline of the course used in that school. The student begins by studying the fundamentals of electricity and telephone circuits. He is then given a voltmeter, a battery, and some wire and is required to set up circuits to diagnose a case of trouble which has been placed on an artificial line. When he has learned to do this under all conditions he will have no trouble learning to operate any type of testing equipment, as a result of merely studying the circuit drawings and circuit descriptions which are associated with the equipment. Testdesks of different makes, and different models of the same make, may have quite different circuits. Therefore, in this article we cannot discuss the circuits of any particular make or model but we will consider some fundamental testing circuits which the reader can apply to the particular equipment he is using.

PART 19. The preceding article in this series appeared in the Aug. 23 issue, p. 19.

There are two basic ways of wiring a voltmeter testing circuit: (1) Metallic battery, and (2) grounded battery. The testman must first of all find out which of these two circuits he is using because some of the tests are quite different, and in one case directly opposite, in these two circuits. In the metallic battery circuit the testing battery is not permanently grounded but may be grounded by operating a key. The advantage is that a simple and direct test for "short" may be made. A disadvantage is that a separate battery is required for each voltmeter position. In the grounded battery circuit one pole of the battery (usually the negative) is permanently grounded and this ground cannot be removed by the operation of any key. Thus one battery may be used for any number of testing positions. Sometimes a storage battery such as the "plate" battery, or the positive telegraph battery, is used for this purpose.

Fig. 1A, B, C, and *D* show some features of the grounded battery circuit while *Fig. 1E* and *F* illustrate the metallic battery circuit. *Fig. 1A* shows the usual grounded battery circuit with all keys normal. The negative pole of the battery is grounded and the voltmeter is connected to the ring side of the line while the tip side of the line is left open. The voltmeter will now measure a ground on ring. When the Reverse Key (R or Rev.) is operated we have the circuit shown in *Fig. 1B.* The meter now measures a ground tip.

When the Ground Key (G or Grd.) is operated with the Reverse Key normal, a ground is placed on the tip of the line as shown in *Fig. 1C.* If the previous two tests have indicated a

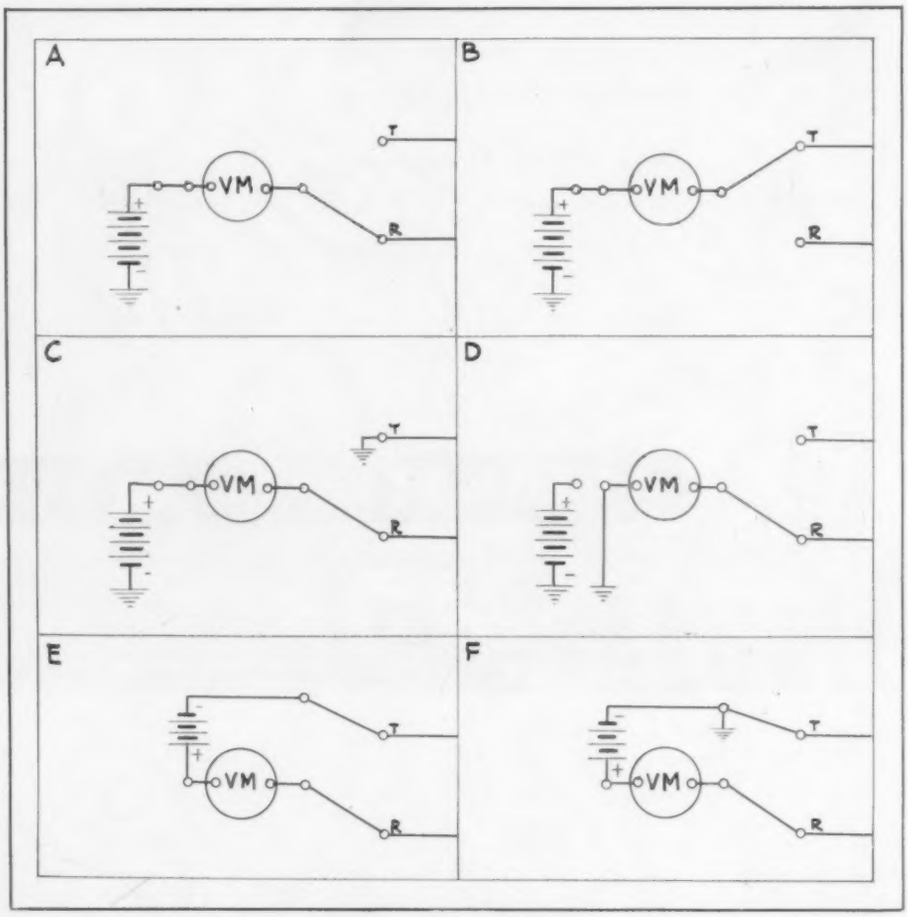


FIG. 1

clear line and a reading is obtained with the circuit of *Fig. 1C* a "short" is indicated. It should be noted that this is an indirect test for "short." The short is first converted to a ground on ring by grounding the tip of the line in the office. The testing current goes out on the ring side of the line, through the short to the tip side of the line and back on the tip wire to the ground in the testdesk. If the Reverse Key is now operated the meter will be connected to the tip and the ground to the ring. If the trouble is a short only, exactly the same reading will be obtained. If the readings are not the same, the difference is probably due to earth currents or some other foreign potential. When both a short and a ground are present, the measurement is somewhat complicated. The readings will depend on the relative positions of the short and the ground and the relative resistance of the short and the ground. There are, in fact, nine possibilities to consider. However, why not clear one case and if the other case is not found at the same location, make another test, locate the second case and clear it.

Fig. 1E shows the usual metallic battery circuit with all keys normal. There is no ground in this set-up and a deflection definitely indicates a short. This is a direct test for short and is a test which is not possible with the grounded battery circuit. It should be noted that in *Fig. 1C* the Ground Key is *operated* to test for a short while in *Fig. 1E* the Ground Key is left *unoperated* to test for a short. Thus the two circuits are directly opposite in this respect.

Fig. 1F shows the metallic battery circuit with the Ground Key operated. This circuit is the same as in *Fig. 1E* except that a ground has been placed on the tip side of the line and the circuit is now exactly the same as that shown in *Fig. 1C*. The meter will now detect either a short or a ring ground. If the Reverse Key is now operated the connections to the line are reversed and the meter will detect either a short or a tip ground.

The metallic battery testdesk has another ground key usually designated BG (Battery Ground). This key removes the wire from the negative pole of the battery and substitutes a ground therefor. The resulting circuit is then exactly the same as that shown in *Fig. 1A* and with the Reverse Key operated, the circuit is the same as that shown in *Fig. 1B*. It will, therefore, be seen that the metallic battery circuit does everything that the grounded battery circuit will do and in addition provides a direct test for short.

Fig. 1D shows the test for Foreign Battery or Foreign Electromotive Force as made with the grounded battery circuit. The key which sets up this circuit is usually designated FEMF. The testing battery is disconnected and plays no part in this test. The pole of the meter, which is normally connected to the testing battery, is now grounded. Since there is no battery in the circuit, any deflection of the needle must be due to some outside EMF on the line, such as a cross with the live side of another exchange line, a cross with some other company's line which carries a dc potential, or possibly to earth currents.

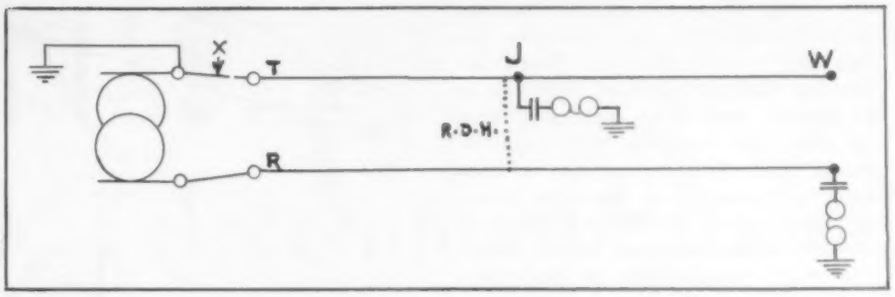


FIG. 2

If the metallic battery circuit is used, the FEMF key disconnects the testing battery at both ends and substitutes a short therefor. In other words, with all keys except the FEMF key normal, the meter only is connected to the line and will detect a foreign potential if it comes in from the line metallic. This may happen when a PBX cord circuit is put up the wrong way or a wiring plan or key equipment is miswired so that two lines may be connected tip to tip and ring to ring. The Ground or BG key is used in addition to the FEMF key to detect the usual foreign battery coming in grounded from the tip or ring of the line.

It is convenient to be able to detect foreign battery when making the usual tests for ground and short. For this reason, the negative pole of the testing battery is grounded and the scale of the meter usually extends beyond the voltage of the testing battery. The positive pole of the CO battery is grounded, therefore, in case of a cross between the line under test and the live side of another exchange line the two batteries are in series aiding and the reading will be higher than the voltage of the testing battery. Example: The voltmeter scale is 0-120, the testing battery is 95 volts and the CO battery 23 volts. A cross will cause a 118-volt deflection. If the foreign potential is positive, it is not so easily detected without the use of the FEMF key.

When testing a positive foreign potential with the usual "zero side" meter, the needle tends to go off the scale to the left, therefore, a Voltmeter Reverse (VR) Key is provided which interchanges the poles of the meter.

When a foreign potential is encountered the testman wants to know its source. It should be remembered that the testing meter is a voltmeter even though it is more often used to measure resistance. Therefore, it will measure the voltage of any foreign potential and this aids in the identification of its source. For this purpose, the voltmeter without shunt or the highest resistance winding is best, as the resistance of the wire between the office and the trouble then becomes negligible. However, the meter reads volts with any shunt.

A negative potential of the same voltage as the CO battery indicates a cross with the live side of another exchange line. A cross with a PBX line may be identified by the voltage of the PBX battery which is usually different from that of the CO battery. The testman should be familiar with the voltages used on fire alarm and similar circuits in his city. Telegraph and teletypewriter circuits, when in operation, have characteristic interruptions. The dc voltmeter will not detect an ac voltage, but these can be identified by the characteristic hum. The pitch of the hum indicates the frequency. Foreign circuits are often carried on leased pairs in the telephone company's cable. Therefore, crosses with these circuits may indicate cable trouble.

Another test made with the voltmeter is the so-called ballistic test which is a rough measurement of capacity. It is used to determine whether a line which tests clear is open or has one or more stations connected to it. Since a cable pair has a capacity which can be detected by this test, it may be used to determine whether a pair is open near to or distant from the office and whether one or both sides are open. However, it cannot be used for locating an open. A much more expensive instrument is required for that purpose.

The test for a line, with one or more bridged ringers, is simple. When the testing circuit is set up to test for a

short *(Fig. 1C* or *1E)* the line and the station condensers are charged, the ring side being positive. When the Reverse Key is operated the line is discharged and then recharged with the ring side negative. Both the discharge and recharge currents pass through the meter in the same direction and cause a momentary deflection or "kick." The amplitude of the "kick" is a rough measurement of the capacity. The capacity of a condenser is readily distinguished from the much smaller capacity of the cable pair and if the condensers in all of the stations are of the same size, the number of stations connected to the line can usually be counted.

To measure the capacity between each side of the line and ground, as when measuring a line with the ringers connected between tip and ground and between ring and ground, is a more difficult problem. Much depends on the wiring of the particular testdesk used and the reader can figure out a method for his desk when he understands the principle involved. The ring only must be charged and then discharged and recharged to the opposite polarity. If the testing battery and the voltmeter could both be reversed, the test would be simple but this feature is not provided in any desk that we know of. It is sometimes accomplished in this manner: One side of the line is charged negative with the central office battery (RCCI Key), then discharged and recharged positive by means of the testing battery. The same test is then made on the other side of the line. We know that some testmen use the test previously described for bridged capacity and depend on the kick when the Reverse Key is moved upward being different in amplitude from that when the key is moved downward. However, this test is unreliable.

We have had an inquiry concerning a statement made in two previous articles (TELEPHONY July 5, page 15; and Aug. 16, page 20) concerning the suitability of the usual type of portable ohmmeter for insulation testing in the central office. The type of meter referred to was fully described in those articles and the reasons given for its unsuitability for testdesk use. However, any meter having at least 100,000 ohms resistance, and which can be used with 90 or more volts of testing battery, and which is accurate and well made, is suitable for use on the test desk whether it has a scale of ohms, a scale of volts, or both. However, in these same articles we pointed out several serious drawbacks to the use of the ohm scale.

We also have a request for an explanation of the device for ringing all bells on a party line when a receiver is off the hook. We will cover this now.

"If I was his little boy, I'd be very, very good. Watch how he handles that big strap."

The type of party line referred to is the selective or semi-selective line with the ringers connected between the tip and ground and between the ring and ground. *Fig. 2* shows a two-party line with the ringing machine connected as it is usually connected through a regular cord circuit of a manual board or the ringing circuit of a dial board. Notice that the ringing machine is connected to the line metallic, but that one pole of the machine is permanently grounded. When connected as shown in *Fig. 2* it will ring the W party, or ring party and will also ring a line with bridged ringers such as an individual line. When the connections to tip and ring are reversed the J party will be rung, as will also a bridged ringer.

When a receiver is off the hook (as shown by the dotted line at the J station), it shorts out the ringing machine and this short has such a low impedance at 20 cycles that neither bell will ring. The testdesk has a special ringing circuit in which there is an open at point "X." This sets up quite a different circuit. The ROH is no longer a short across the ringing machine. The ringing current goes out on the ring side of the line and part of it rings the W station as usual. The other part of the current crosses over to the tip side of the line through the ROH and rings the J party. It is the same as if both bells were on the same side of the line. This device is of no value in case of a ROH on a line with bridged ringers.

There are many other fundamental testing circuits which are worthy of special study and we expect to continue this discussion in some future article. However, our next article will deal with preventive maintenance as applied to station equipment.

(To Be Continued)

JAPAN'S
Reorganized Telecommunications

By TETSUICHI KURASHIGE, Telephony's Japan Correspondent

KNOWING of TELEPHONY's interest in the reorganization of the Japanese telecommunications system, resulting from its editor's meeting with members of the Telecommunications Committee of the Diet, when they visited Chicago and other points in the United States last October to study telephone operations under private enterprise, I am glad to report that the deliberations of the Diet have led to the formation of the Nippon Denshin-Denwa Kosha (Japan Telegraph-Telephone Public Corp.).

(**EDITOR'S NOTE:** *The new organization, although still government owned, will be operated as a public corporation somewhat on the order of the TVA in the United States.*)

Only the communist members of the Diet were against the bill to set up this corporation which was sponsored by the Liberal Party. They argued that such an organ might open the door to graft and corruption as in the case of the wartime "Kodan." The Kodan was a government organization which regulated the distribution of critical materials during the war.

The Nippon Denshin-Denwa Kosha came into existence on Aug. 1, 1952, taking over the properties of the national telecommunications enterprise, formerly operated by the Ministry of Telecommunications.

It was felt that such severance would improve the service, which had been cumbersome and inefficient under government control and operation. Under government operation the enterprise was fettered by limitations in the budget, which tended to hamper expansion programs and efforts to better service.

"Telephone famine" has been a continuous bane in Japan for the past 60 years under government operation. It remains to be seen, however, whether the new set-up can take care of the hundreds of thousands of delayed applications for telephone installations. Meanwhile, subscribers who can afford to do so, will buy "telephone rights" through telephone brokers instead of waiting indefinitely for telephones to be installed through government channels. These "rights" are nothing more than the purchase of telephones from owners who care to sell them for profit or otherwise. As in other commodities, the law of supply and demand applies to telephones. And telephone brokers do a lucrative business!

(**EDITOR'S NOTE:** *The price of a telephone "right" often exceeds the equivalent of $300.*)

It was simultaneously decided to place international telecommunications under private operation as soon as arrangements can be completed to organize a private company. The domestic service, however, will be operated as a public-owned utility adopting the good points found in private management.

(**EDITOR'S NOTE:** *Japan's international telephone and radio-telegraph system is extensive. Until Occupation Force directives made it a part of the Communications Ministry, it had been operated efficiently for many years as a private company.*)

The following are the highlights of the newly-organized Nippon Denshin-Denwa Kosha, which will be referred to herein as the "Kosha."

The Kosha, a wholly-owned government corporation, will be placed under a Management Committee. Its activities will be subject to the general supervision of the Minister of Postal Services. The Management Committee members are to be appointed by the Cabinet with the approval of the Diet. Their tenure of office is four years, and they are to serve without pay. Although the members are not amenable to the National Public Service Personnel Law, they are deemed as persons engaged in public service with regard to penal provisions of laws and regulations.

The officers of the Kosha consist of the governor, vice governor, and trustees who are appointed by the governor. The trustees serve for two years. Such officers are not allowed to become officers of organizations whose object is profit-making. Neither will they be permitted to engage in business of their own without the approval of the competent ministers.

The budget must be approved by the Diet, but the Kosha has some leeway in diverting its appropriation within the approved overall expenditure. The Kosha is required to submit its financing program each quarter to the Minister of Postal Services, the Minister of Finance and the Board of Audit. The Board of Audit audits the books and accounts of the Kosha. It is authorized to issue bonds or borrow money. *In case bonds are to be floated abroad, the government guarantees the payment of principal and interest.*

Next, let us see what is the status of international telephone services, which operate under international telecommunications convention.

Eventually the international telecommunications services will be detached from the functions of the Kosha. The principal reason for this move is to raise and improve the level of international services. In foreign countries where such services are under private enterprise, they are being operated efficiently. Therefore, in order for Japan to keep abreast of the growing competition, officials of the Telecommunications Ministry think such a separation is desirable.

At present there are eight telephone circuits in operation between Tokyo and Oakland, Cal., which handle around 10,000 calls monthly to the United

(Please turn to page 35)

Courts and Commissions

Southwestern Associated Wins Rate Increase in Arkansas

Annual rate increase totaling an approximate $132,600 recently was granted Southwestern Associated Telephone Co., Dallas, Tex., by the Arkansas Public Service Commission in an order fixing the company's rate base as $2,901,589.

The company, which serves 10 Arkansas telephone exchanges, had requested an annual increase totaling $280,344 in a petition filed last January.

The proposed rates were suspended at that time, pending a hearing, and the reduced rates approved by the commission in the current order will become effective on the next monthly billing date.

The commission ruled the authorized increase is necessary to permit the company to earn 6 per cent on its investment, but denied allowances for cash working capital and approved a depreciation allowance of 3.6 per cent.

V V

Cities Protest Dividing Classified Directory

A formal complaint protesting a division of the Orange County, California classified telephone directory into three sections was filed on Aug. 24 against the Pacific Telephone & Telegraph Co. by the cities of Santa Ana and Fullerton.

The protest to the California Public Utilities Commission asks for an order to the company requiring it to continue publishing a single county-wide directory with no increase in advertising rates. The request cites that Orange County is a small and integrated marketing area in trading and should not be divided.

The company proposes to divide the county so the county-wide directory would have three separate classified sections, covering the north, central and coastal areas, respectively. Advertisers would have the option of placing ads in any one or combination of directories. Company officials explained that this would cheapen advertising rates in the northern and southern portions, as rates at present are based on the Santa Ana area, which has the greatest circulation.

The municipal protest, similar to informal objection from various civic and business groups, contends that businessmen seeking customers from all portions of the county would pay rates nearly three times over present costs to cover the three directories.

V V

Approves $985,000 REA Loan For N. C. Company

The North Carolina Utilities Commission has authorized the Heins Telephone Co., Sanford, to borrow up to $985,000 from the Rural Electrification Administration.

The money will be used for improving the company's services, including the installation of dial exchanges at Sanford, Jonesboro, Broadway and Olivia, and to expand other rural areas of Lee, Harnett, Chatham and possibly other adjacent counties.

The loan will be used to retire a present loan from a private lending agency and to finance the expansion program.

In approving the loan, the commission at the same time gave the company permission to increase its rates following completion of a major part of the expansion program.

V V

Bell and Southwest Ask OK on Merger

An application to merge properties and operations of the Southwest Telephone Co., Pratt, Kan., with those of Southwestern Bell Telephone Co., was filed on Aug. 28 with the Kansas Corporation Commission by representatives of both companies.

If approved, the merger will allow Southwestern Bell to incorporate into its present state organization the Southwest company's exchanges at Pratt, Liberal, Bucklin, Coldwater, Fowler, Greensburg, Meade, Minneola, and Plains, and at Hooker, Okla.

Southwestern Bell already owns all of the stock of the Southwest company. To be effective, the merger must be approved by both the Kansas commission and the Federal Communications Commission. The Kansas commission has set a tentative hearing date on the application for Sept. 16.

V V

Bell Seeks 10-Cent Paystation Rate in Missouri

Southwestern Bell Telephone Co., on Aug. 29, asked the Missouri Public Service Commission for permission to raise the local paystation rate in Missouri from five to 10 cents.

The company emphasized it is making the request as the only way to help offset higher wages without seeking a blanket state-wide increase in rates. General Manager H. R. Towles estimated the paystation rate increase would produce about one million dollars a year in additional revenue.

The company was authorized last January to put into effect an $11,119,000 general rate increase in Missouri. That increase, however, did not anticipate future wage hikes, Mr. Towles said.

Also sought is an upward adjustment of some non-recurring telephone charges such as new connections, moves and changes in telephone instruments.

With about 25,000 paystations in the state, Mr. Towles estimated the jump to 10 cents a call would produce $75,000 to $80,000 a month. The other adjustments sought would add $6,000 to $8,000 a month.

V V

Suspends Pa. Bell's Rate Increase Second Time

The Pennsylvania Public Utility Commission on Aug. 26 suspended for an additional three months, until Dec. 7, a proposed $31,706,000 annual rate increase by the Bell Telephone Co. of Pennsylvania.

The commission said it needed more time to complete its investigation into the rates. The inquiry started last March.

The company originally filed the increase to go into effect on Mar. 7. The

commission suspended it then for six months to Sept. 7.

On Aug. 14 the commission ordered the telephone company to submit plant reproduction cost figures based on price levels for the last five years.

V V

Petitions for Toll Rates Between Exchanges

The West Virginia Public Service Commission is considering a request by the Pocahontas Telephone Co. to set toll rates between some of its exchanges in Greenbrier and Pocahontas counties.

Manager J. M. Bear of the company, which has about 1,200 subscribers, said the charges would bring in an additional $500 to $600 annually. The income would finance a proposed new line between Frankford and Marlinton.

Protesting the petition were a number of residents of Pocahontas.

They contended, in general, that the company should improve its service—termed inadequate now—before thinking about charging tolls.

V V

Indiana Independent Asks Increase in Rates

An unspecified rate increase was asked by the Whitestown Citizens Telephone Co. on Aug. 27 in a petition filed with the Indiana Public Service Commission.

Rates now paid by its 568 subscribers are "insufficient" to pay operating costs and increased wage costs are soon to be incurred, the petition said. It asked the commission to fix new rates which would be "reasonable, fair and adequate."

V V

Plans Issue of Stock, Bonds

General Telephone Co. of Ohio, formerly the Ohio Associated Telephone Co., has asked the Ohio Public Utilities Commission for permission to sell 120,000 shares of its no par common capital stock for $600,000. It also asked for authority to issue and sell $2,000,000 in first mortgage bonds. The company said the money is to be used for capital improvements.

V V

Minnesota Company Sold

Minnesota Railroad & Warehouse Commission on Sept. 2 authorized the sale of the telephone properties at Argyle, Kennedy and Stephen to the Marshall County Telephone Co., by the Minnesota Telephone Co. These exchanges serve approximately 758 company-owned stations and 192 switch stations.

Extends Time for Company To Make Improvements

Time has been extended from July 1 to Dec. 31, for the Farmers Telephone Co., Taylor, Neb., to rehabilitate its plant and equipment and improve its service.

On Dec. 27, 1951, the Nebraska Railway Commission ordered the company to make improvements by July 1 after investigation of a complaint (TELEPHONY, Mar. 15, p. 34) had shown the properties to be in disrepair.

A recent inspection by the commission disclosed that all necessary improvements had not been made as ordered. However, the company had complied with part of the provisions of the order and was proceeding as rapidly as possible with the remaining portion.

V V

Applies for First Increase In 21 Years

A Virginia telephone company which has not asked for a rate increase in 21 years has finally been forced to seek one. The company is the Princess Anne Telephone Co.

Kermit S. Land, general manager, said rising costs had finally forced the petition for the increase in rates. The company is asking an average boost of $1.50 a month per subscriber.

V V

Approves $16,000 Increase For N.C. Company

The North Carolina Utilities Commission on Sept. 5 authorized the Mooresville Telephone Co. to increase its rates approximately $16,000 a year.

In its application for the increase, the company said it needed the additional revenue to pay off debts, attract new capital, pay rising operating expenses and to provide a reasonable return.

The increase approved will give the company a return of 2.53 per cent for the present, the commission said, but Southern Bell Telephone & Telegraph Co. will later take over long distance operations at Mooresville, cutting the Mooresville company's expenses and raising its rate of return thereby to approximately 6.5 per cent, which the commission considers a fair rate of return.

The company, established in 1900, has around 1,230 telephones in Mooresville and surrounding Iredell County.

In its order granting the increase, the commission set monthly business rates at $6.20 for one-party service, $5.00 for two-party service, $4.50 for four-party service and $4.50 for rural multi-party service. Residential rates were set at $3.65; $3.15; $2.65 and $2.65.

V V

New Company to Serve In Roxbury, Kan.

A certificate for the operation of a telephone company in a McPherson County, Kansas, community that has been without telephone service for almost a year was issued Sept. 3 by the Kansas Corporation Commission.

The new company will serve about 125 customers in the town of Roxbury and the surrounding area. It is to be operated as the Roxbury Telephone Co. by Roy L. Bowen. The community formerly was served by a telephone company which suspended operations about a year ago.

V V

New York Bell Buys Service Line Company

The New York Public Service Commission has approved the sale of physical assets of the Mills Telephone Co., serving rural subscribers in Allegany and Cataraugus counties, to the New York Telephone Co.

The Mills company is a service line company with no central office. All its lines extend into the New York Telephone Co. office at Allegany where switching is done.

V V

Ohio Independent Gets Increase in Rates

The Ohio Public Utilities Commission on Sept. 13 authorized a $2,539 rate increase for the Somerton Telephone Co.

Its 144 subscribers will pay an average of $1.50 additionally each month. None protested the increase at a public hearing before the commission.

V V

Bell Increases Rates in Various Iowa Exchanges

Telephone rates will be increased Oct. 1 in 14 border cities in Iowa, C. L. Sampson of Des Moines, vice-president and general manager of Northwestern Bell Telephone Co. in Iowa, said on Aug. 29.

The increases will range from 25 cents to $1.25 for residential service and from $1.00 to $2.50 for business service, he said. No toll rates are involved in the repricing.

Communities affected are Sioux City, Dubuque, Burlington, Akron, Estherville, Hamburg, Hawarden, Lake Park, Muscatine, Northwood, Rock Rapids,

Sibley and Spirit Lake, plus "a few items of service at Davenport."

Mr. Sampson said the increases were made to bring the 14 communities more in line with other Iowa cities as far as rates are concerned.

"Other local services were repriced previously," said Mr. Sampson, "but services involved in these exchanges have not been repriced since prior to World War II."

V V

South Dakota Company Granted Rate Increase

The South Dakota Public Utilities Commission on Aug. 30 approved new rate schedules for the Faulkton and Orient exchanges of the Western Telephone Exchange.

New Faulkton rates will include $7.25 a month for single party business service; $4.00 for single party residence service and $3.75 for two-party residence service.

The Orient exchange rates will include $5.50 for single-party business; $3.75, single party residence, and $3.50, two party residence service.

V V

Asks O.K. on REA Loan Addition

Eastern Rowan Telephone Company, Inc., Granite Quarry, on Sept. 5 asked the North Carolina Utilities Commission for authority to borrow an additional $80,000 from the Rural Electrification Administration telephone loan fund. The money would be used to improve rural service.

V V

OBITUARY

THAD C. CONE, 48, eastern district manager of the Lincoln (Neb.) Telephone & Telegraph Co. was fatally injured in an automobile crash one mile west of Peru, Neb., on Aug. 30.

Mr. Cone was driving alone toward Peru when a car in front of him going west attempted to turn onto a side road. The vehicles collided killing a lady passenger in the other car and critically injuring the driver. Mr. Cone died shortly after in a hospital at Auburn, Neb.

He had been with the Lincoln company since 1924 serving as chief clerk in the construction department until the war. From 1942 until 1946 he was with the U. S. Army Signal Corps in which he served as communications officer for the Second and Fifteenth Air Force at Colorado Springs as a lieutenant colonel. He returned to the Lincoln company in 1946 and was area manager at Seward and Nebraska City before becoming eastern district manager in March, 1951.

He is survived by his widow, Margaret, and a brother, Gerald, who is a plant engineer for the Northwestern Bell Telephone Co. at Omaha, Neb.

Here's how 500 employes of one of Southwestern Bell Telephone Co.'s exchanges in Dallas, Tex., beat the heat recently as the city sweltered under 105-degree temperatures. They sat in front of 10½ tons of melting ice and rows of huge fans. Left to right are DELANE SMITH, HAZEL MAE BROOKS, Mrs. ALMA DAVIDSON, RAMONA CASSIDY, Mrs. LOURENE RAWLS, an instructor, and GENEVA WYLIE, also an instructor. Photo courtesy of Dallas *News*.

V V

J. F. McGrath Promoted By Rochester Company

James F. McGrath has been appointed superintendent of buildings and supplies of the Rochester (N. Y.) Telephone Corp., to succeed W. T. Kelly, who passed away recently.

Mr. McGrath, following graduation from high school in 1919, spent two years in the telephone manufacturing field. He entered the operating field in 1921 as a clerk in the construction office of the Rochester Telephone Corp. After a series of promotions he was transferred to the buildings and supplies division on June 1, 1951 as storekeeper. On July 1, 1952 he was promoted to supervisor of supplies and he now becomes responsible for the entire division.

Mr. McGrath attended the Rochester Institute of Technology. He is presently a member of the Industrial Buyers Association.

In his new capacity he will be responsible for all purchasing and for the maintenance of all buildings of the Rochester company.

V V

"It is time that the line should be drawn between Americans who believe in individual liberty and those who believe in human slavery; those who believe in freedom and those who believe in governmental controls, those who follow the precepts of the Founding Fathers and those whose eyes turn towards Moscow." — Somerset (Pa.) *Daily American*.

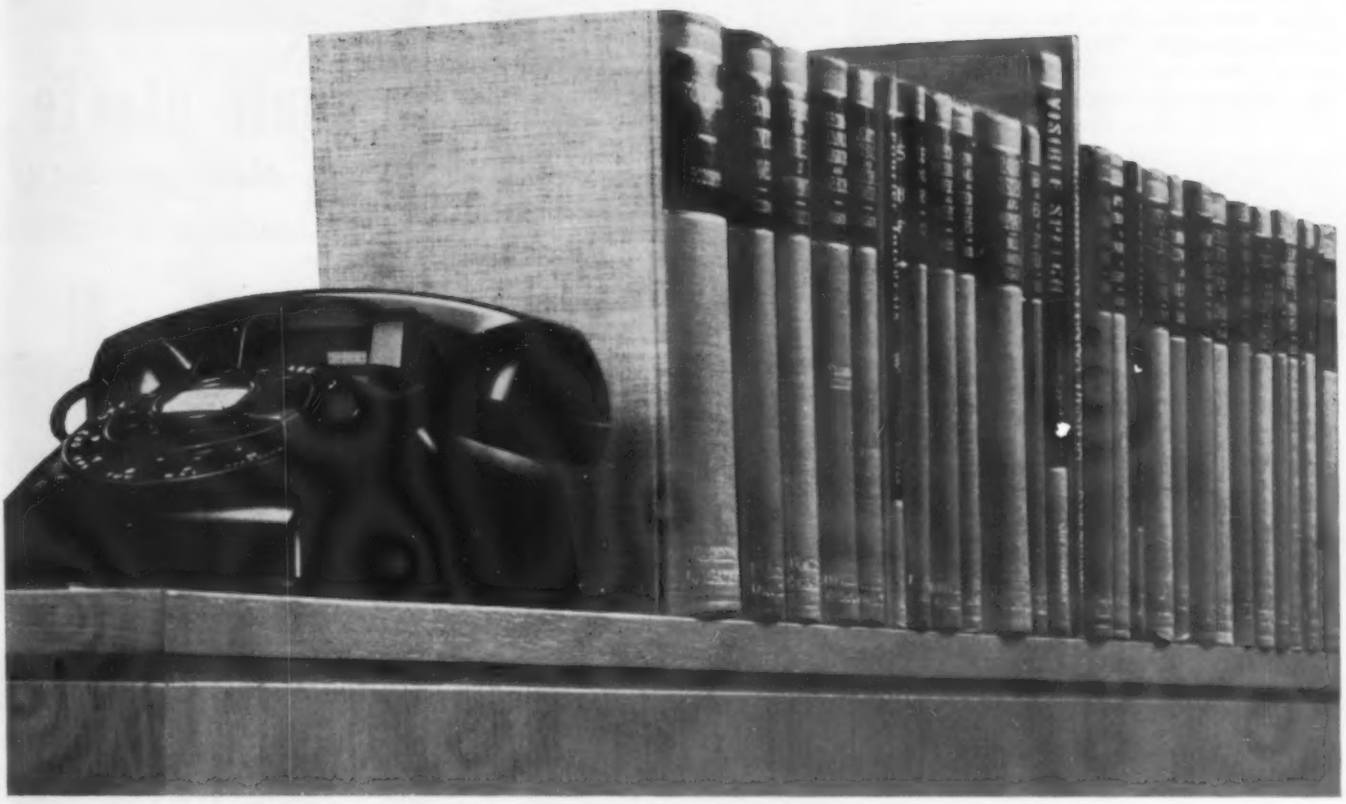
REA Allocates $2,291,000 in Six States

(Concluded from page 13)

The REA funds will be used to furnish facilities to serve 50 rural subscribers not included in the first loan to this company. In addition, the loan will cover increased costs of construction since the original loan was approved. Construction has been progressing satisfactorily on this project and it is about 85 per cent complete. The cut-over is now planned for the middle of October.

The improvements and expansion made possible under the two REA loans will result in service for 1,350 rural families and establishments over 124 miles of line in Rowan County. All of the subscribers of the Eastern Rowan Telephone Co. will be able to call Salisbury, their financial and trade center, without toll charge.

Telephone Science Shares Its Knowledge



The Bell Telephone Laboratories Series of books is published by D. Van Nostrand Company. Other technical books by Laboratories authors have been published by John Wiley & Sons. Complete list of titles, authors and publishers may be obtained from Publication Dept., Bell Telephone Laboratories, New York 14.

List of Subjects: Speech and hearing, mathematics, transmission and switching circuits, networks and wave filters, quality control, transducers, servomechanisms, quartz crystals, capacitors, visible speech, earth conduction, radar, electron beams, microwaves, waveguides, traveling wave tubes, semiconductors, ferromagnetism.

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REA Allocates $82,000,000 To 110 Companies; 80 Co-ops

THE Rural Electrification Administration announced on Aug. 28 that by the end of the fiscal year, telephone loan allocations had reached 82 million dollars to 190 borrowers in 39 states. This is about double the amount that had been allocated a year ago when the telephone program had been in effect a year and a half.

The telephone loans will enable the borrowers (110 commercial companies and 80 cooperatives), to bring up-to-date telephone service to 136,000 rural families now without telephones, and improved service to 115,000 families who now have inadequate service, the REA stated.

According to the announcement, the past year also saw REA telephone borrowers making progress in construction. By the end of June this year, 71 borrowers whose loans totalled 29 million dollars had met all requirements to enable them to obtain loan funds, and had started or were ready to start construction. About 8 million dollars had been advanced to telephone borrowers.

Ninety-four borrowers have made contracts with engineering firms to design their new telephone systems. Sixty-six have completed acceptable system designs for providing modern telephone service on an area-wide basis; 55 have completed plans and specifications for their central office equipment and 46 have completed plans for construction of their outside plant. Thirty-one borrowers have completed acceptable plans and specifications for buildings, the REA announcement said.

Installations of poles and wires has actually started on 31 REA-financed rural telephone systems. Through 81 dial central offices they will bring telephone service to 13,000 rural families now without telephones and improved service to more than 10,000. Construction has started on 5,900 miles of new and rebuilt line on these systems, and the improvement of an additional 600 miles of line is under way. Of this, approximately 2,100 miles was completed at the end of the fiscal year, REA stated.

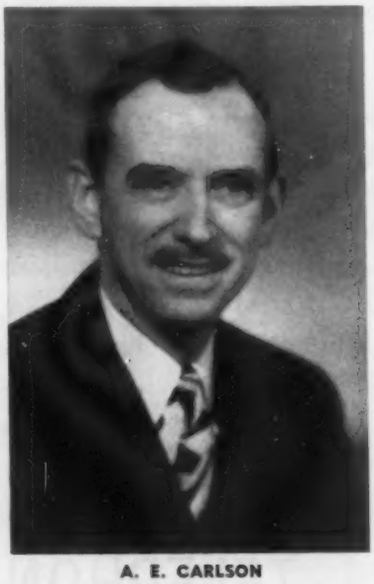
REA reported that at the end of the fiscal year it had pending about 500 loan applications for some 89 million dollars. Applications are still being received faster than they can be processed, it said.

Gary Companies Name Carlson Executive Vice President

Albin E. Carlson, for the past number of years secretary and treasurer of Associated Telephone & Telegraph Co. and Telephone Bond & Share Co., the two principal investment companies of the Gary Group, has been elected executive vice president of each of these companies. Announcement of election to the two posts was made by F. S. Spring, president of both the Associated and Telephone Bond and Share companies.

Associated Telephone & Telegraph Co. is the parent organization for Automatic Electric Co., Chicago, Ill., telephone equipment manufacturer, and its manufacturing affiliates in Canada, Belgium and Italy. The subsidiaries of Telephone Bond & Share Co. include many of the domestic telephone operating companies of the Gary Group.

Mr. Carlson's association with the Gary Group dates from 1929, when he entered the employ of the Associated company shortly after graduation from Northwestern University where he had majored in accounting. During his 23 years of service since that time, he has been principally concerned with the direction of corporate, accounting, tax and insurance functions as they relate to the investment, manufacturing, operating and other companies of the group.



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Chicago, Mr. Carlson was transferred to the Kansas City office of Theodore Gary & Co. In 1942, two years after the Kansas City operation had been moved to Wilmington, Del., he assumed charge of that office, and five years later returned to Chicago in connection with his duties as secretary and treasurer for most of the principal companies of the group.

He has served in these capacities for Theodore Gary & Co., Associated Telephone & Telegraph Co., Telephone Bond & Share Co. and Automatic Electric Co., in addition to serving as a director to these and other companies in the Gary Group.

V V

Controlling Interest in Pa. Company Sold

The Foight family has sold its controlling interest in Murrysville Telephone Co., Export, Pa., to a new group of men.

Former officers were George Fink, president; P. R. Foight, treasurer; John G. Foight, secretary.

The new president and manager is Harold G. Payne, Wilkes-Barre, formerly with Commonwealth Telephone Co., Dallas, Pa.

Vice president and general plant superintendent is Leo Glahn. Hale Coughlin, Jr., is the new secretary-treasurer. Mrs. Richard McNemar, Delmont, continues to be office manager.

Public Interest Profit

(Continued from page 16)

the coast and to serve its people without the restraint of inadequate preparations for the future. Good profits in our business do not mean high prices. As a matter of fact, reasonable profit results in lower telephone prices than would otherwise be necessary.

The way to good service and long-range economy is to plan to meet all public demands with an adequate supply of the best possible equipment. You and I know that it is cheaper in the long run to put in cables with enough low-cost circuits to take up the growth of five years than it is to string single circuits year by year as growth demands. But if there is not money enough to put in the cables, the single circuits become as inevitable as they are uneconomical.

Piecemeal and emergency additions to plant, controlled not by the needs of the service but limited by lack of funds, cannot result in either the increased quality of service or the economy which a soundly planned growth can accomplish. No service company is free to do its best for the public when hampered by lack of funds.

Increased Rates Not Inflationary

I am against inflation, yet I point to the need of increased telephone prices. That may seem inconsistent, but I don't think it is. In the first place, I do not agree that increases in telephone prices are inflationary at all. I'll enlarge upon that later. But apart from that—whatever is necessary in the way of telephone prices in order that we may keep on giving the people of the Pacific Coast all the telephone service and the kind of telephone service they want, has to be done regardless of what anyone thinks about it in its inflationary aspects. The telephone industry must not be depressed and made weak, because here is an industry that adds to the country far more through the service rendered than it takes out in the prices we need to charge.

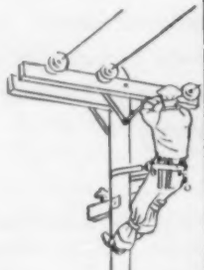
I say that I do not concede that an increase in telephone prices need be inflationary at all. Let us get back to an accepted definition of inflation—too many dollars chasing too few goods. Under that definition you cannot have inflation except by (a) increasing the number of dollars or (b) decreasing the amount of goods, or (c) both. If you do not change the total number of dollars or credit in circulation, an increase in telephone prices may mean there will be fewer dollars for other things, but over all it could not be inflationary. On the other side of the equation—the production side—more dollars flowing into telephone prices would increase productivity and to that extent reasonable telephone prices would retard inflation rather than contribute to it.

Crippling Service Way to Economic Unbalance

Weakening the telephone system would be a leading example of how to throw the economic system out of balance. Telephone service is one of the principal factors of effective productivity in America. If telephone service is retarded by unduly restricting the flow of money into the business, one of the most effective weapons in the industrial arsenal of democracy will be damaged.

We want *only* what is in the public interest. And it is in the public interest that our prices be adjusted more in line with our costs. Actually, telephone service is cheaper today—in terms of real value (baskets of tomatoes, buckets of milk, tons of steel)—than ever before.

But it is necessary in the public



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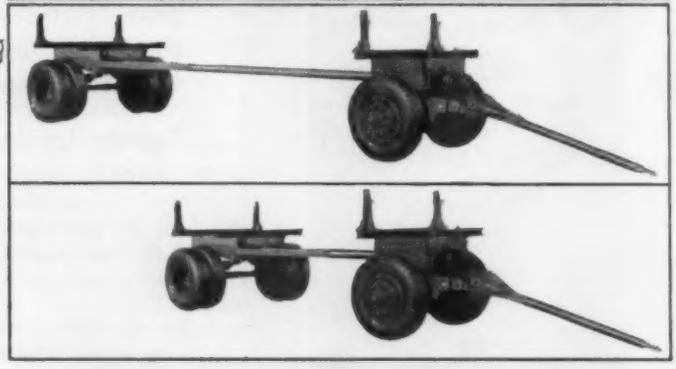

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interest to adjust telephone prices more in accord with the purchasing power of the dollar. We can adjust them *downward* if the traditional purchasing power of the dollar can be restored, but we must adjust them *upward* if it can't. And there is still little evidence that the inflationary forces are being firmly and finally checked.

The only way we can continue to do our full job in the public interest and in the interest of all is by keeping a steady flow of new investment money into the business. To accomplish this, we must have fair prices. If we are to get them, we must appeal to our customers, our employes, to everyone in fact for their understanding and help with our problem.

An industry that bears the shackles of an inadequate profit cannot do its best. In this country, with our dangers of today, our challenges of tomorrow, only the *best* telephone system is good enough. So, the need for a good telephone profit is not *our* need alone—a good telephone profit is a *public* need. And we ought to keep right on saying so—telling everybody in fact who will listen. And a surprising lot of people do listen—when we talk I believe that we are heard, that we are believed—for what we speak is a vital truth that creates belief simply because it is so. I propose that you and I keep on telling the telephone story. We have a proud record of acting in the public interest. We must also speak in the public interest.

V V

Six-County N. D. Co-op Plans $1,700,000 System

L. E. Armfield, consulting telephone engineer for the Ulteig Engineering Co., met with the board of directors of the Dakota Central Rural Telephone Cooperative Association at Carrington, N. D., recently to discuss the engineering plans for the six-county area which the co-op proposes to serve. Oliver Sund, Cleveland, N. D., chairman of the co-op's board, presided.

Major purpose of the meeting was to study in detail the engineer's plans for the location of lines and dial exchanges.

The engineering plans will be turned over to the Rural Electrification Administration in the near future for action on allocation of funds. The present plans call for a loan of approximately $1,700,000 from REA.

Other members of the board of directors are: Lawrence Utke of Glenfield, vice chairman; Russell Belquist of New Rockford, Albert Deede of Woodworth, Peter Friezan of Cathay, Walter Krueger of Carrington, J. H. Lyman of Grace City and Fred R. Topp of McHenry.

Japan's Reorganization

(Concluded from page 27)

States alone. The calls to all parts of the world average around 14,000. An official of the Ministry of Postal Services believes that calls are likely to increase if the number of circuits are increased.

Taken on a yearly average, each call to the United States is about six minutes in length. Rates for Sunday and weekdays are different. On weekdays the charge is $12 for the first three minutes, and $4.00 for every minute beyond three minutes. The Sunday rate is $9.00 for the first three minutes and $3.00 for every minute exceeding three minutes.

The level of Japanese technicians is fairly high in the theoretical aspects of telecommunications. However, Japan may need foreign technical "know how" in manufacturing some types of equipment which are not commonly produced or available locally.

V V

McCracken, Parsons Elected Vice Presidents of Kellogg

William A. McCracken, works manager, assistant secretary and assistant treasurer, and Francis M. Parsons, sales manager of Kellogg Switchboard & Supply Co., Chicago, Ill., were elected vice presidents of the company, an associate of International Telephone & Telegraph Corp., in a recent meeting of the Kellogg board of directors.

In making the announcement, James H. Kellogg, company president, pointed out that the two vice presidential positions were newly created. Harry C. McCluskey serves the company as executive vice president and treasurer, and Claude D. Manning is vice president and secretary.

Mr. McCracken, who joined the company as assistant works manager in December, 1944, was appointed works manager in January, 1946. He was elected assistant secretary and assistant treasurer of the company in 1950, but resigned the assistant treasurer post upon his election to the vice presidency.

Before joining Kellogg, McCracken had served as engineer of manufacture for Philco Corp., and later plant manager of the Philco subsidiary, National Union Radio Corp., Lansdale, Pa.

Vice President Parsons, who became

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President JAMES H. KELLOGG (center) of Kellogg Switchboard & Supply Co., congratulates newly-elected Vice Presidents F. M. PARSONS (left) and W. A. McCRACKEN.

affiliated with the Kellogg company in 1923, left in 1928 to take over the position of superintendent of the telephone division of the Central Western Public Service Co., Omaha, Neb. Rejoining the Kellogg organization in 1934, he served successively as manager of its switchboard sales department, supervisor of field representatives, and eastern sales manager. During World War II, he served as the company's government representative in Washington, D. C. He was appointed sales manager in 1944.

The two newly-elected Kellogg vice presidents hold membership in a number of organizations. McCracken is a member of the personnel and labor relations committee of the Illinois State Chamber of Commerce, a member of Clearing Branch, Society for Advancement of Management, and the Independent Telephone Pioneers Association.

Mr. Parsons is vice president of the Independent Telephone Pioneers Association and a member of the American Institute of Electrical Engineers.

V V

Buys Two Exchanges in Iowa

The Keota and Sigourney exchanges, both operated by the Dupuis family as the Peoples Telephone Co. for nearly half a century, have been purchased by the Central Iowa Telephone Co., Cedar Rapids, it was reported on Aug. 8.

V V

Buckley Retires

Dr. Oliver E. Buckley, New York City, chairman of the board of Bell Telephone Laboratories, Inc., retired on Aug. 31, after 38 years of service in the Bell System.

V V

Kellogg Moves Small Offices

Kellogg Switchboard and Supply Co., Chicago, Ill., announces the transferring of their general sales offices from the main office and factory to 79 W. Monroe St., Chicago. The general sales department is under the direction of F. M. Parsons, vice president and sales manager.

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SANTA CLARA, CALIFORNIA

In the Nation's Capital

(Concluded from page 30)

be commercially operated is a victory for private enterprise over Japan's pattern of government operation.

Japan has long been a nation where all public services—railroads, wire communications, radio, etc.—bear the strong imprint of rigid supervision or outright control by the government. With television, it is a different story. The Japanese Radio Regulatory Commission—a postwar agency patterned after our own Federal Communications Commission—granted the first and, so far, only television license to a network which was privately owned and operated.

The Japanese commission's surprising decision was made over the protests of the government's own broadcasting corporation, Japan's counterpart of the British Broadcasting Corp. Japanese observers regard this action as one of the few signs of a trend toward a free economy since the end of the American occupation.

V V

Organizational Changes Announced by General

Everett C. Roys, vice president and chief engineer of General Telephone Co. of Pennsylvania, who for the past several months has been on leave to serve as deputy director and subsequently director of the Communications Equipment Division, National Production Authority with headquarters in Washington, D. C., has been elected a vice president of General Telephone Co. of Michigan with headquarters at Muskegon, Mich., and will assume his new duties on Sept. 15. In his new position Mr. Roys will act as operating vice president.

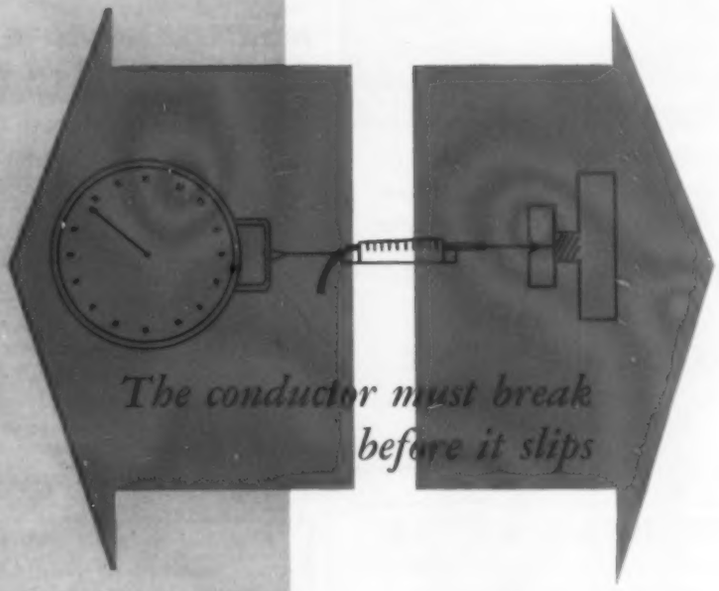
Mr. Roys has been continuously employed in the telephone industry since his graduation from Syracuse University in 1923. Prior to joining the General Telephone Co. of Pennsylvania, he was associated with a number of other operating companies of the General Telephone System. During World War II, Mr. Roys was on active duty with the United States Signal Corps with the rank of major.

Mr. Roys will be succeeded as chief engineer for General Telephone Co. of Pennsylvania by Frank D. Reese (TELEPHONY, Sept. 6, p. 36).

Walter G. Wright, who has been chief engineer of General Telephone

ALPHADUCT

P clamp adhesion test



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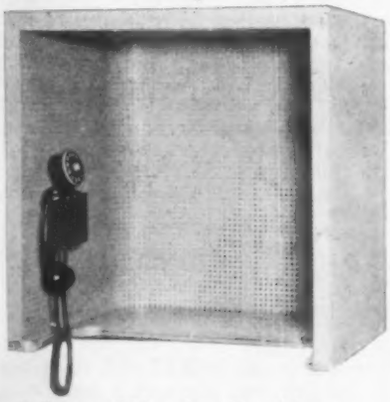

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Co. of Michigan, has been elected a vice president of General Telephone Co. of the Southwest, with headquarters at Dallas, Tex. Mr. Wright will be vice president in charge of operations for the company.

Mr. Wright has been continuously employed in the telephone industry since his graduation from Rutgers University in 1924.

V V

North Carolina Company Plans Million Dollar Expansion

The Hickory (N. C.) Telephone Co. on Sept. 5 announced plans for a $1,000,000 expansion program involving its exchanges at Hickory, Valdese, Hildebran and Granite Falls, N. C. Included in the program according to W. A. Carpenter, general manager and treasurer of the company, will be the installation of 800 additional central office lines in Hickory, with added equipment sufficient for serving from 4,000 to 5,000 more telephones in the area. New equipment is due to arrive in October and will be in service early in 1953.

V V

Operator Toll Dialing Opened in Cincinnati

Direct dialing by long distance operators in Cincinnati, Ohio, to distant telephones in more than 1,600 communities throughout the country was inaugurated on Sept. 7 as the new automatic toll switching equipment in that city was placed in service. The installation was a joint project of the Cincinnati & Suburban Bell Telephone Co., and the Long Lines Department of the American Telephone & Telegraph Co.

This 4 million dollar system, installed over a period of 11 months, not only permits direct dialing by the operator of many long distance calls originating in the Cincinnati area but automatically switches calls routed through Cincinnati to other cities. By 1953, it is expected that this equipment will handle a total of 62,000 calls on an average business day or 76 per cent of Cincinnati's long distance traffic.

Known as "Operator Toll Dialing," this system now has 18 cities in its network. Similar equipment is being installed for cutover early next year at New Orleans, La., and Scranton, Pa.

V V

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5420 L & N Faultfinder with reinforced fibroid carrying case.

This is a modified slide-wire bridge for measuring cable and line faults. Resistance tests, Murray, Fisher Improved and Varley loop tests, also tests for opens.

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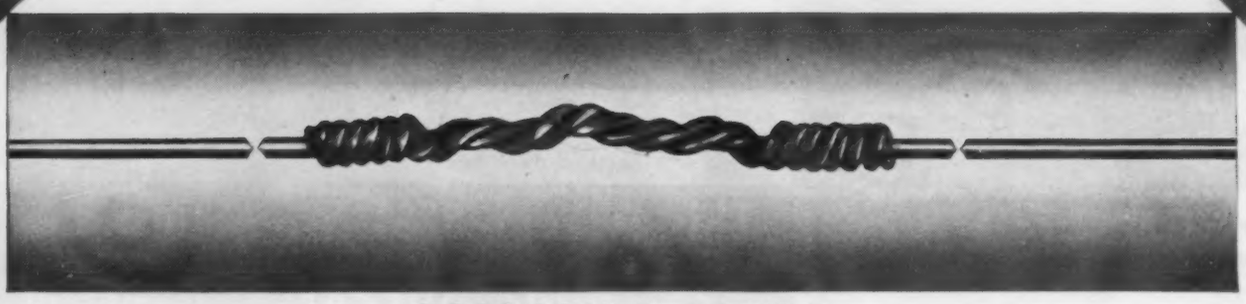

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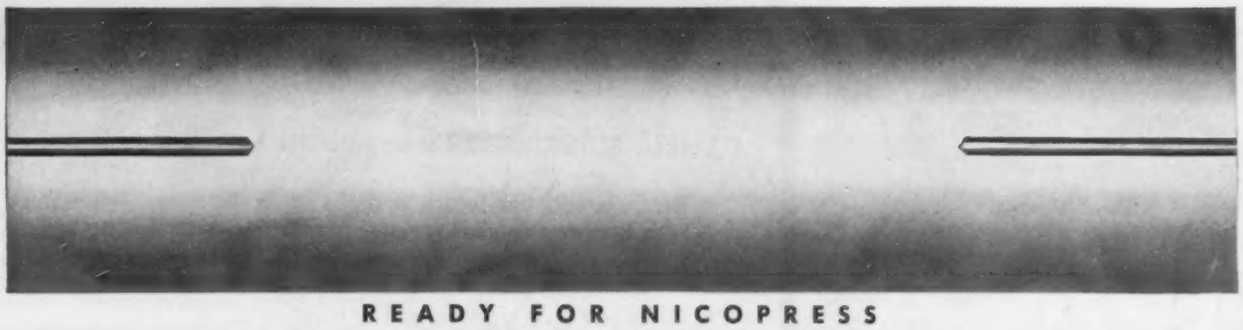

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